SAMSUNG

Basic Model : MAX-555

CHANGE NOTES.

*** Refer to Table of Contents**

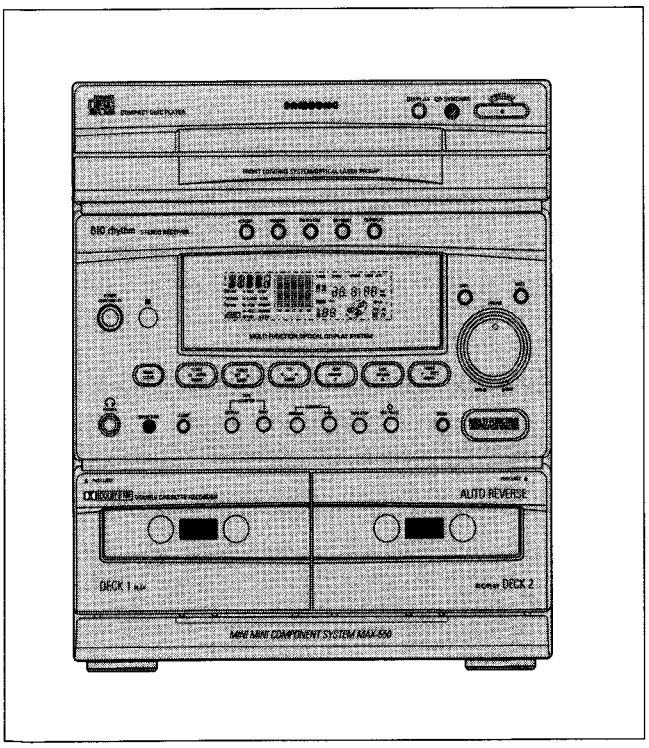
MAX-550

SERVICE Manual SUPPLEMENT-1

Supplement to the Service Manual MAX-550

This supplement contains change notes differing from the Service Manual MAX-555

use both this supplement and the Service Manual parts number 14709-0118-00



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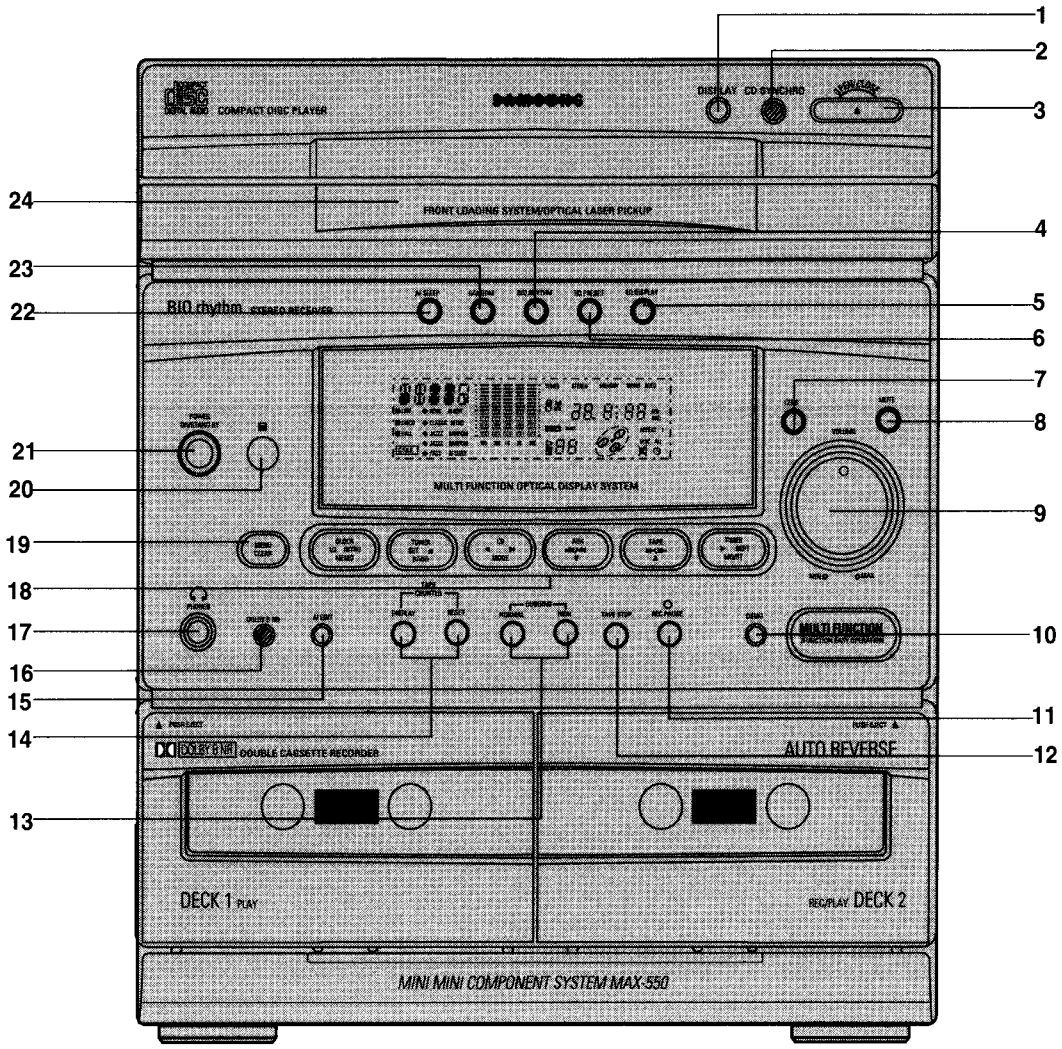
Code No,: 14739-0118-01

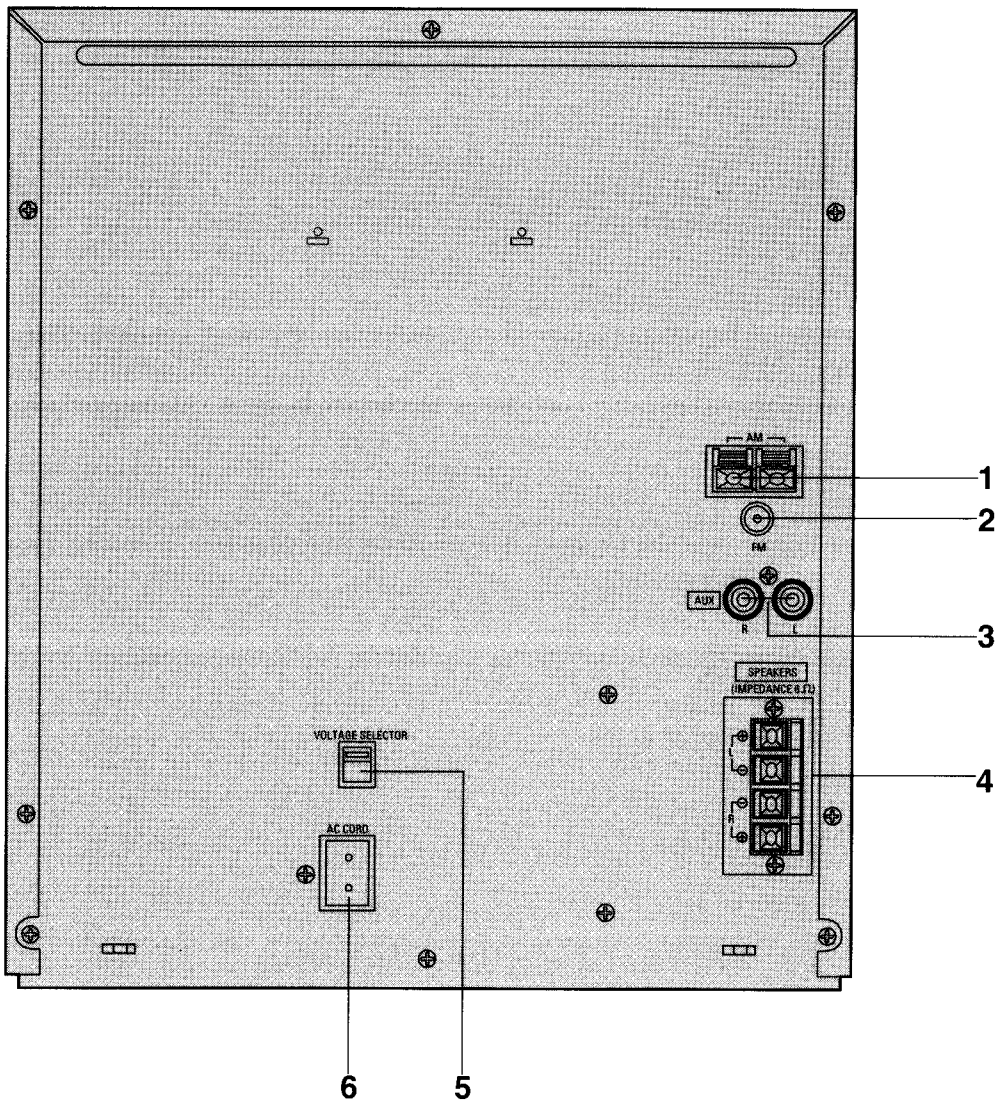
1. Location of controls

1-1. Front view



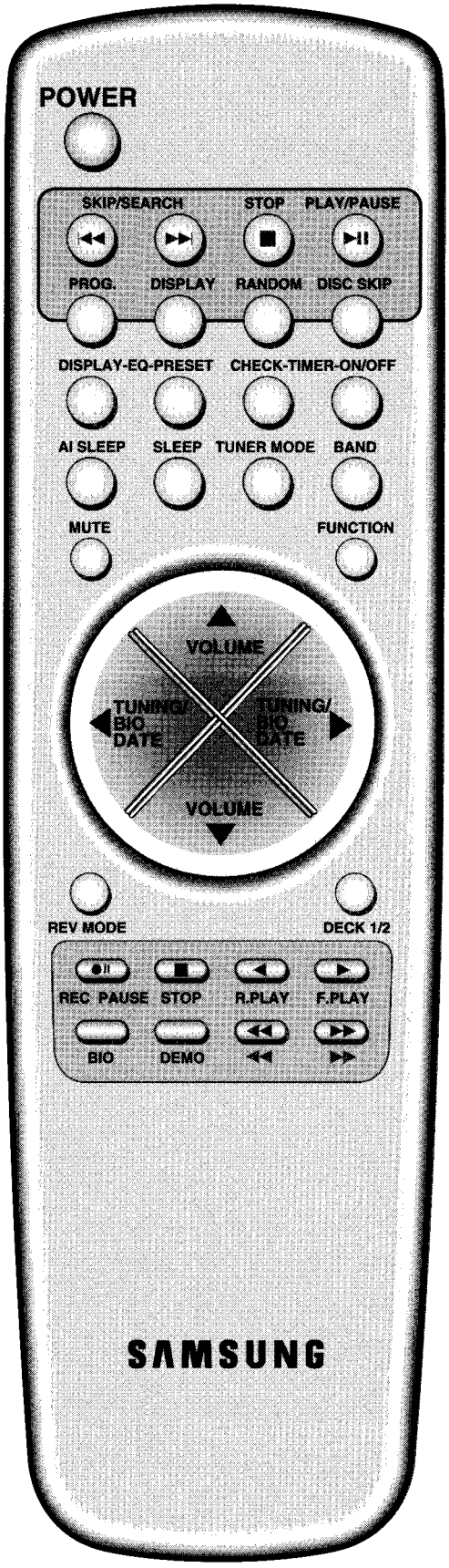
1. DISPLAY button
2. CD SYNCHRO button
3. OPNE/CLOSE button
4. BIO RHYTHM button
5. EQ DISPLAY button
6. EQ PRESET button
7. C.F.B.S button
8. MUTE button
9. VOLUME
10. DEMO button
11. REC PAUSE button
12. TAPE STOP button
13. DUBBING button
14. TAPE COUNTER DISPLAY/RESET button
15. AI-EDIT button
16. DOLBY B NR button
17. PHONE JACK
18. MULTI FUNCTION button
19. MENU/CLEAR button
20. REMOTE sensor
21. POWER button
22. AI-SLEEP button
23. RANDOM button
24. DISC TRAY

1-2. Rear view



1. AM ANTENNA terminal
2. FM ANTENNA terminal
3. AUX jack
4. SPEAKER terminal
5. VOLTAGE SELECTOR (OPTION)
6. AC CORD connector

1-3. Remote control



2. Disassembly instruction

Remove the plug from the wall outlet before disassembling the unit.

2-1. How to disassemble cabinet-top (FIG. 1)

2-1-1. Remove 11 screws on the Cabinet-Top.

2-1-2. Lift the rear part of the Cabinet-Top at the angle of 40° ~ 60° as indicated by the arrow in. FIG.1.

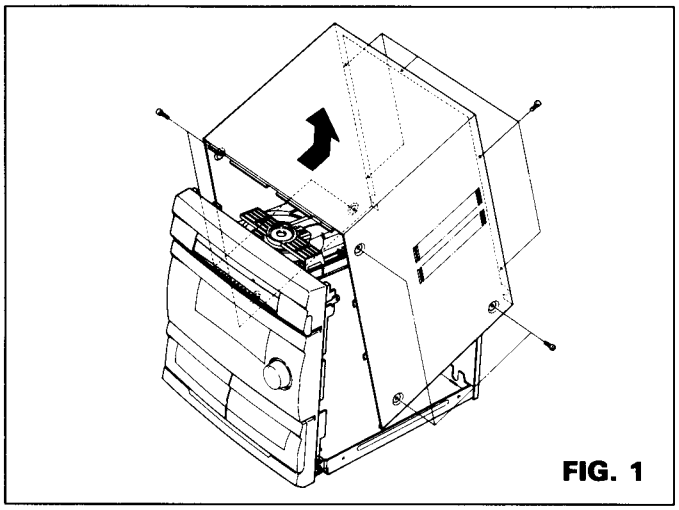


FIG. 1

2-2. How to disassemble CD-Mecha, CD-door (FIG.2)

2-2-1. Remove four No. ①, and lift CD-Mecha up.

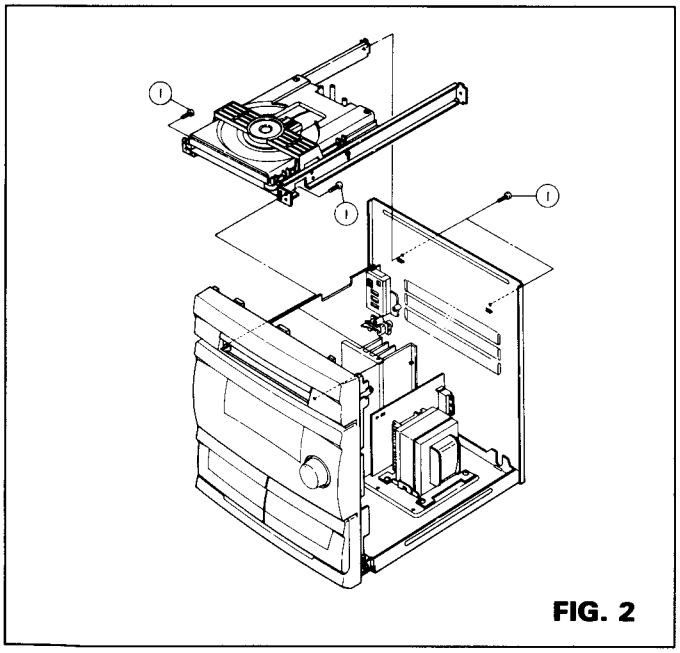


FIG. 2

2-3. How to disassemble cabinet-rear & main PCB (FIG.3)

2-3-1. Remove ten No. ② screws; then, lift cabinet-rear (No. ③) as indicated by the arrow in the FIG.3 so that it can be detached.

2-3-2. Take No. ④ Main PCB out from the rear.

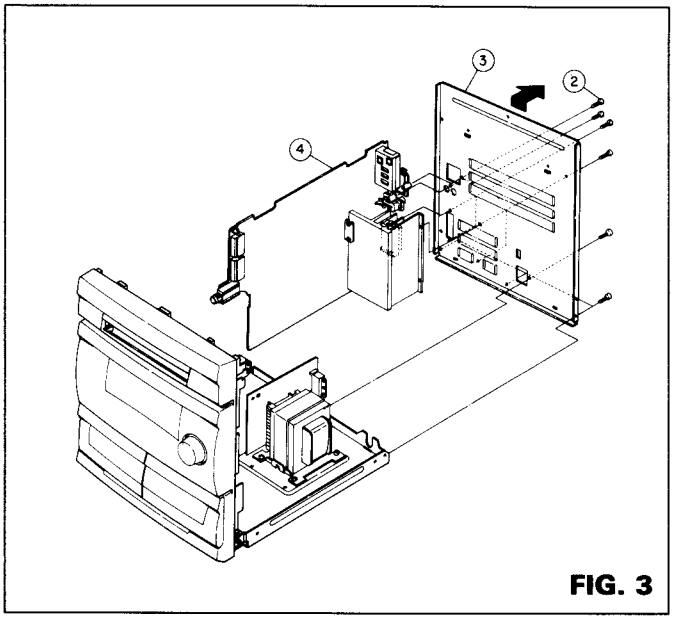


FIG. 3

2-4. How to disassemble panel front (FIG. 4)

2-4-1. Remove two No. ⑤ screws.

2-4-2. In case of disassemble; If you push 2 Hooks of the bottom, you can disassemble set easily.

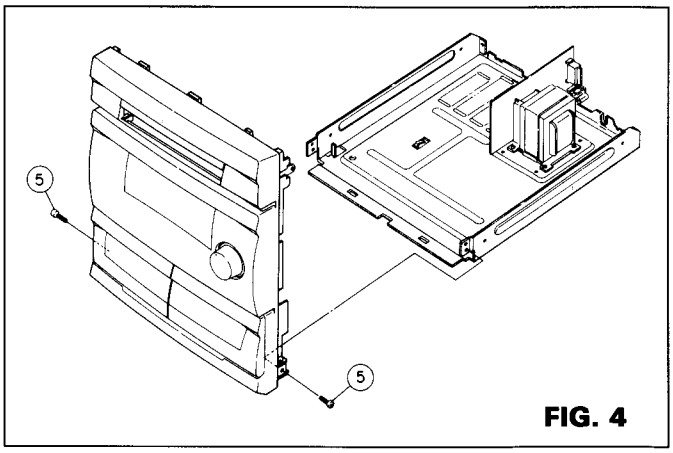


FIG. 4

3. Basic circuit operation

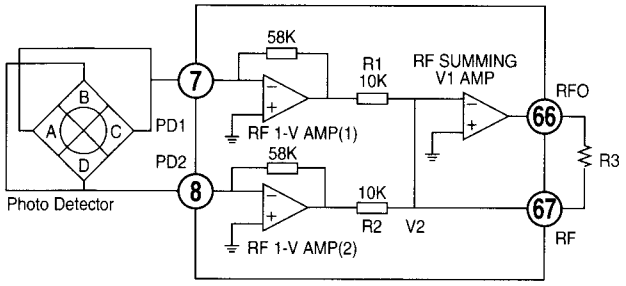
3-1. µ-com(LC8866P) : UIC1

NO.	PIN NAME	PORT NAME	FUNCTION	I/O	ACTIVE
1	P52	DATA	PLL /FUNC	O	H/L
2	PWM	CLK	PLL / FUNC	O	
3	P20	PLL CE	PLL IC CHIP ENABLE	O	
4	P21	SOL1	IF COUNT REQUEST SIGNAL	O	H
5	P22	SD	TUNED DETECTOR SIGNAL	I	L
6	P23	STEREO	TUNER STEREO DETECTOR SIGNAL	I	L
7	P24	HALL A	A DECK AUTO STOP / CNT CHECK	I	H/L
8	P25	HALF A	A DECK TAPE	I	L
9	P26	MODE A	A DECK STATE	O	
10	P27	F/REC	B DECK F/REC CHECK TAB CHECK	I	L
11	TEST1	NON USED			
12	RES	RESET			
13	XT1	XT1			
14	XT2	XT2			
15	VSS	VSS	DIGITAL GND		
16	CF1				
17	CF2				
18	VDD		+5V		
19	P80/AN0	A/D KEY	AD CONVERTOR	I	
20	P81 / AN1	A/D KEY	AD CONVERTOR	I	
21	P82 / AN2	HALL B	B DECK AUTO STOP/CNT CHECK	I	H/L
22	P83 / AN3	HALF B	B DECK TAPE	I	L
23	P84 / AN4	MODE B	B DECK STATE	I	
24	P85 / AN5	R/REC	B DECK R/REC TAB CHECK	I	L
25	P86 / AN6	AMPS IN	AMPS IN(SIGNAL 'H', BLANK 'L')	I	
26	P87 / AN7	EQ INPUT	EQ AD INPUT	I	
27	P70 / INT0	SCOR		I	
28	P71 / INT1				
29	P72 / INT2	POSNS	POWER CORD SENSE	I	L
30	P73 / INT3	REMOCON	REMOCON INPUT SIGNAL	I	L
31	S0 / T0	G1	VFD GRID CONTROL SIGNAL	O	
32	S1 / T1	G2	VFD GRID CONTROL SIGNAL	O	
33	S2 / T2	G3	VFD GRID CONTROL SIGNAL	O	
34	S3 / T3	G4	VFD GRID CONTROL SIGNAL	O	
35	S4 / T4	G5	VFD GRID CONTROL SIGNAL	O	
36	S5 / T5	G6	VFD GRID CONTROL SIGNAL	O	
37	S6 / T6	G7	VFD GRID CONTROL SIGNAL	O	
38	S7 / T7	G8	VFD GRID CONTROL SIGNAL	O	
39	S8 / T8	G9	VFD GRID CONTROL SIGNAL	O	
40	S9 / T9	G10	VFD GRID CONTROL SIGNAL	O	
41	S10 / T10	G11	VFD GRID CONTROL SIGNAL	O	
42	S11 / T11	G12	VFD GIRD CONTROL SIGNAL	O	
43	S12 / T12	G13	VFD GIRD CONTROL SIGNAL	O	
44	S13 / T13	G14	VFD GIRD CONTROL SIGNAL	O	
45	S14 / T14	G15	VFD GIRD CONTROL SIGNAL	O	
46	S15 / T15	G16	VFD GIRD CONTROL SIGNAL	O	
47	Vdd Vpp		+5.6V		

NO.	PIN NAME	PORT NAME	FUNCTION	I/O	ACTIVE
48	Vp		VFD GRID VOLTAGE(-35V)		
49	S16	S1	VFD SEGMENT CONTROL SIGNAL	O	
50	S17	S2	VFD SEGMENT CONTROL SIGNAL	O	
51	S18	S3	VFD SEGMENT CONTROL SIGNAL	O	
52	S19	S4	VFD SEGMENT CONTROL SIGNAL	O	
53	S20	S5	VFD SEGMENT CONTROL SIGNAL	O	
54	S21	S6	VFD SEGMENT CONTROL SIGNAL	O	
55	S22	S7	VFD SEGMENT CONTROL SIGNAL	O	
56	S23	S8	VFD SEGMENT CONTROL SIGNAL	O	
57	S24	S9	VFD SEGMENT CONTROL SIGNAL	O	
58	S25	S10	VFD SEGMENT CONTROL SIGNAL	O	
59	S26	S11	VFD SEGMENT CONTROL SIGNAL	O	
60	S27	S12	VFD SEGMENT CONTROL SIGNAL	O	
61	S28	S13	VFD SEGMENT CONTROL SIGNAL	O	
62	S29	S14	VFD SEGMENT CONTROL SIGNAL	O	
63	S30	S15	VFD SEGMENT CONTROL SIGNAL	O	H
64	S31	S16	VFD SEGMENT CONTROL SIGNAL	O	L
65	P00	OPTION		I	L
66	P01	OPEN SW	CD TRAY OPEN S/W	I	H/L
67	P02	CLOSE SW	CD TRAY CLOSE S/W	I	H/L
68	P03	ISTAT	CD SENSE	I	H/L
69	P04	MCLK	CD DSL CLOCK	O	H
70	P05	MDATA	CD DSP DATA	O	H
71	P06	XLT	CD DSP XLT	O	H
72	P07	CD MUTE	CD PART MUTE CONTROL	O	H
73	P10 / S00	CD RESET	CD RESET	O	
74	P11 / S01	SUBQ		I	H
75	P11 / SCKO	SQCK		O	H
76	P13 / S03	LKFS	GFS	I	L
77	P14 / S04	FOK		I	H
78	P15 / SCK1	LDON	LASER ON	O	H
79	P16 / BUZ	CLOSE	TRAY CLOSE SIGNAL	O	H
80	P17 / PWMO	OPEN	TRAY CLOSE SIGNAL	O	H
81	P30	CD HI SYC	CD HIGH SPEED LED	O	H
82	P31	VR LED	VOLUME LED	O	H
83	P32	VR DOWN	VOLUME DOWN SIGNAL	O	H
84	P33	VR UP	VOLUME UP SIGNAL	O	H
85	P34		TAPE REVERSE MODE	O	H
86	P35		TAPE REVERSE MODE	O	H
87	P36		TAPE REVERSE MODE	O	H
88	P37	A MUTE	AUDIO MUTE	O	H
89	Vss	Vss	GND		
90	Vdd	Vdd	+5V		
91	P40	POWER CNT	POWER ON/OFF CONTROL	O	H
92	P41	B. RES	BGNS RESET	O	
93	P42	B. CLK	BGNS CLOCK	O	
94	P43	B.STB	BGNS STROBE	O	
95	P44	NAR	NUMBER ADRESS	I	
96	P45	SOL2		O	
97	P46	E_STB	EXPAND1_STB	O	H
98	P47	E_CLK	EXPAND1_CLK	O	H
99	P50	E DATA	EXPAND1_DATA	O	H
100	P51	ST OUT	STOUT	I/O	L

3-2. CD section

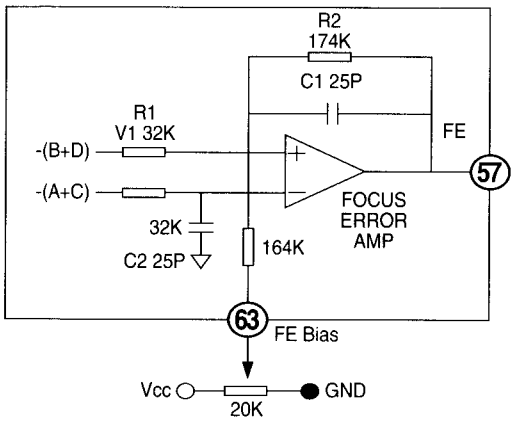
1) RF Amp(KA9220) : NIC9220



RF I-V Amp(1) and RF I-V Amp (2) are converted to voltage via internal resistance of 58kΩ from the current of PD1(A+C) and PD2 (B+D) ; then, this voltage is added to RF summing amplifier.
The signal (A+B+C+D) is applied to RFO (No.2 terminal).
RF output voltage can be calculated as follows:

$$VRF = -R3 \times (iPD1 + iPD2)$$
$$= -R3 \times (V1/R1 + V2/R2)$$
$$= -R3 \times (V1/10K + V2/10K)$$
$$= -R3/10K \times (V1 + V2)$$

2) FOCUS ERROR Amp(KA9220) : NIC9220



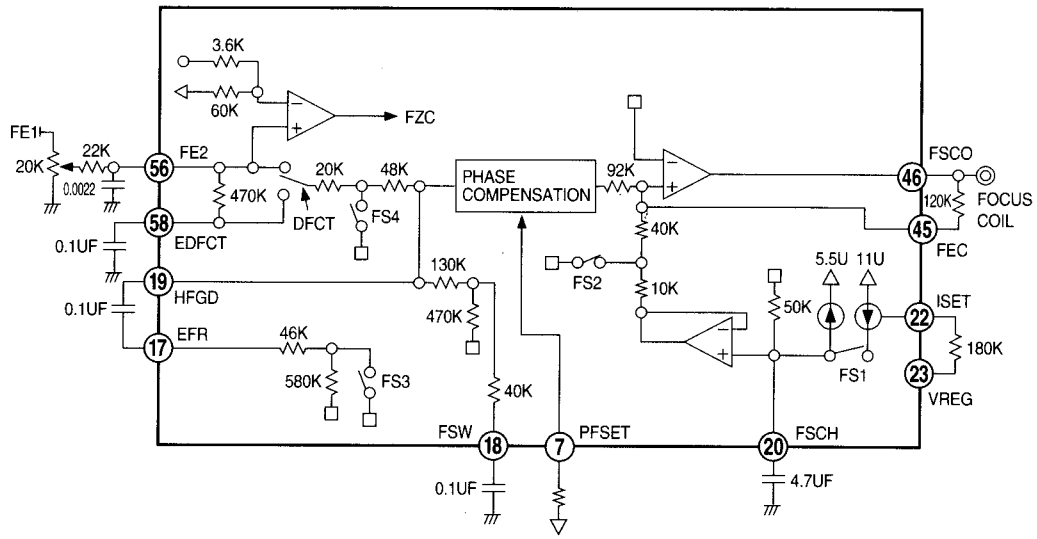
FOCUS ERROR Amp is the circuit which amplifies the difference between RF I-V Amp(1) output(A+C) and RF I-V Amp(2) output (B+D).
These two signals are supplied to (-) and (+) input terminals of FOCUS ERROR Amp. The FOCUS ERROR signal resulting from this difference voltage is applied to FE (Terminal No. 57). The FE output voltage of this low frequency component varies depending on { (A+C) - (B+D) }.
VFE can be obtained as follows.

$$VFE = (R2/R1) \times (V2-V1) = 5.4(V2-V1)$$

This FOCUS ERROR voltage is sent to FOCUS SERVO circuit to maintain optimum focusing.

3) FOCUS SERVO SYSTEM(KA9220) : NIC9220

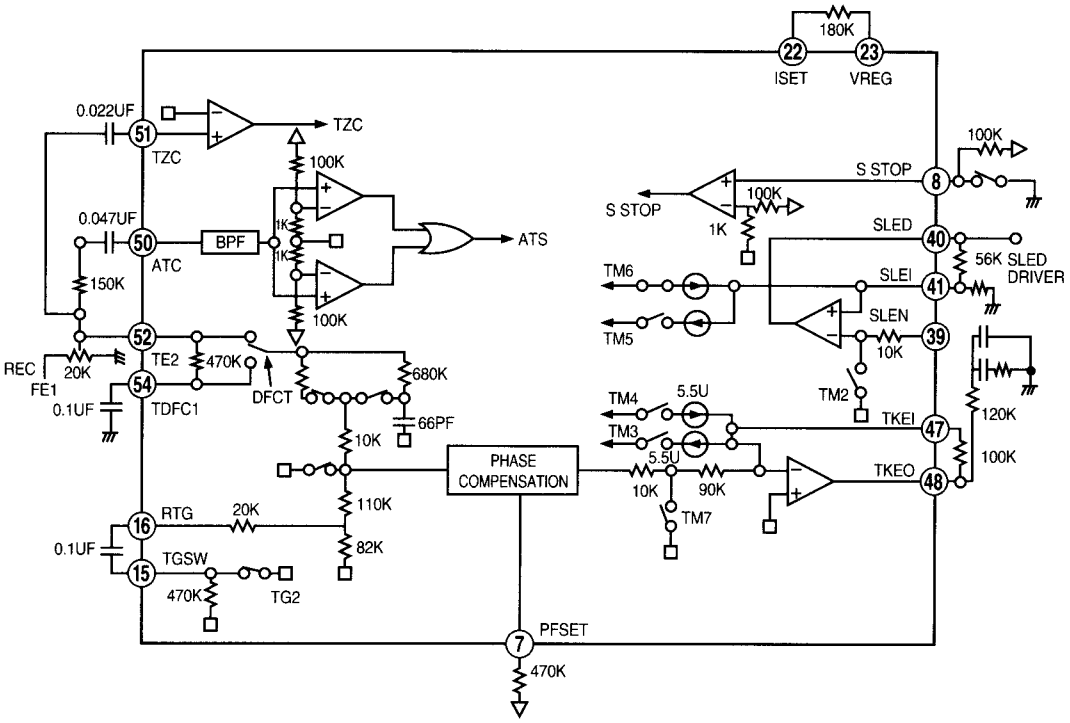
The diagram of Focus Servo System is shown in the following.
When FS3 is ON, high frequency gain decreases in the form of low frequency time constant by pin 17, pin 19, and capacitor connected to internal resistance.
The capacitor between pin18 and GND has the time constant picking up the low frequency operated in PLAY mode.



The maximum frequency of focus phase compensation is inversely proportional to the resistance connected to pin7.
Focus search peak is about 1.1 Vp-p, and is inversely proportional to the resistance connected to pin22,23 ; however, if this resistance changes, the peak of track jump and sled kick changes.
The inversion input of FZC comparator is set to 5.7% of the difference between Vcc and VC(pin69) { 5.7% x (Vcc -VC) }.
Note: If the resistance connected to pin 7 changes, the phase compensation peak of focus, tracking, sled servo changes. At the same time, 'op-amp' dynamic range and offset voltage also change.

4) TRACKING SLED SERVO SYSTEM(KA9220) : NIC9220

The diagram of Tracking Sled Servo System is shown in the following. The capacitor between pin15 and 16 has a time constant, and lowers the high frequency when TG2 is off. The maximum frequency of tracking phase compensation is inversely proportional to the resistance connected to pin7(about 1.2KHz at 470K). The tracking jump in the direction of FWD and REV is decided when TM3 and TM4 are ON, and the peak voltage induced from tracking coil is decided by the both TM3 and TM4 current values, and feed back resistance of pin47.
Track jump max. Voltage= TM3(TM4) current x feedback resistance.



FWD or REV sled kick is carried out when TM5 of TM6 is ON , and the peak voltage added to sled motor is decided by TM5 or TM current and the feedback resistance of pin no. 41.
Sled jump max. voltage = TM5(TM6) current x feedback resistance.
Each SW current is decided by the resistance connected to pin no.22 and 23.
When the resistance is about 150kΩ.

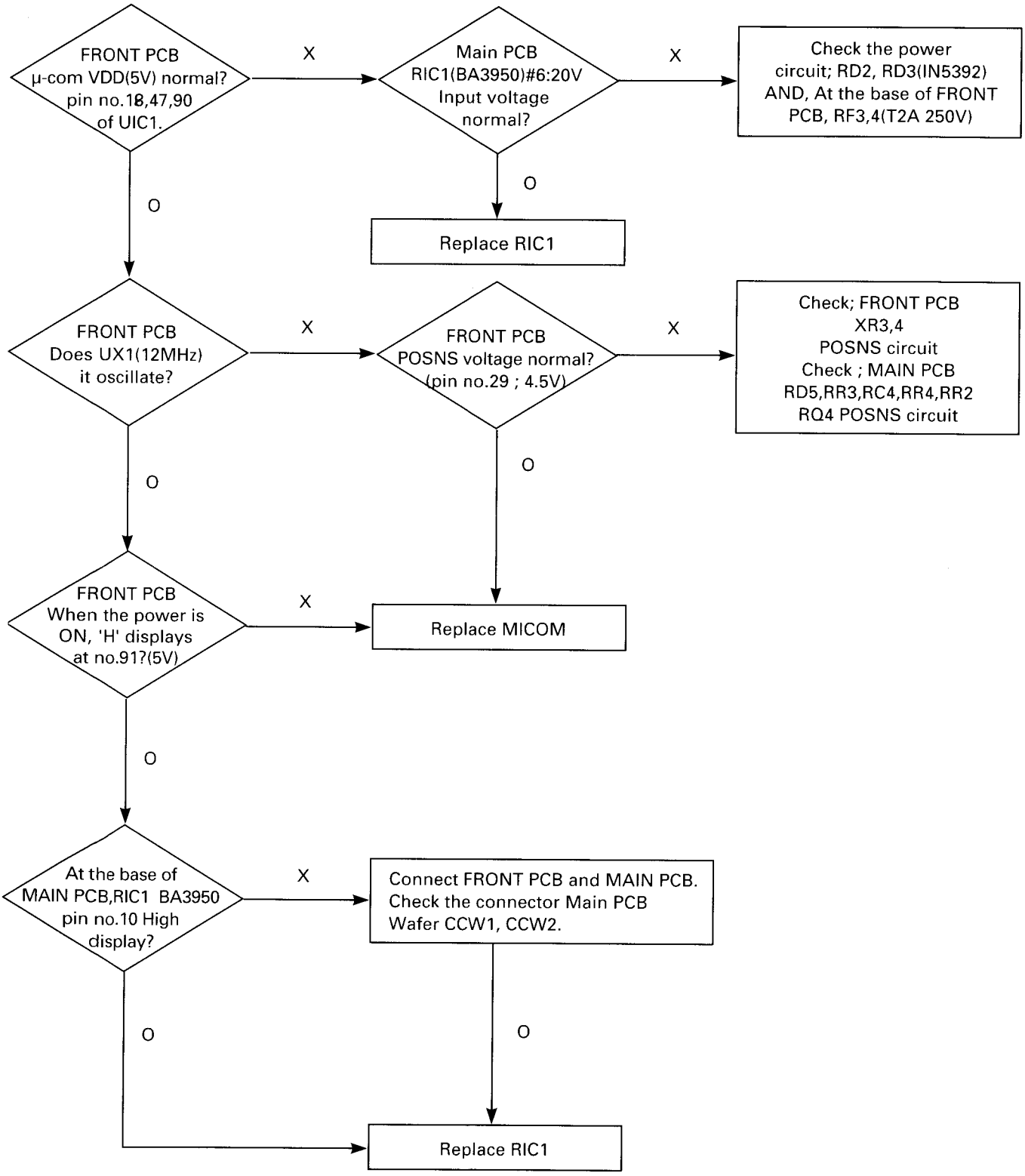
TM3 or TM4 = 11μA ;
TM5 or TM6 = 22μA.

This current is value is almost inversely proportional to the resistor, variable within a range of about 5 to 40μA for TM3.
STOP is the ON/OFF detection signal for the limit SW or the sled motor's innermost circumference.

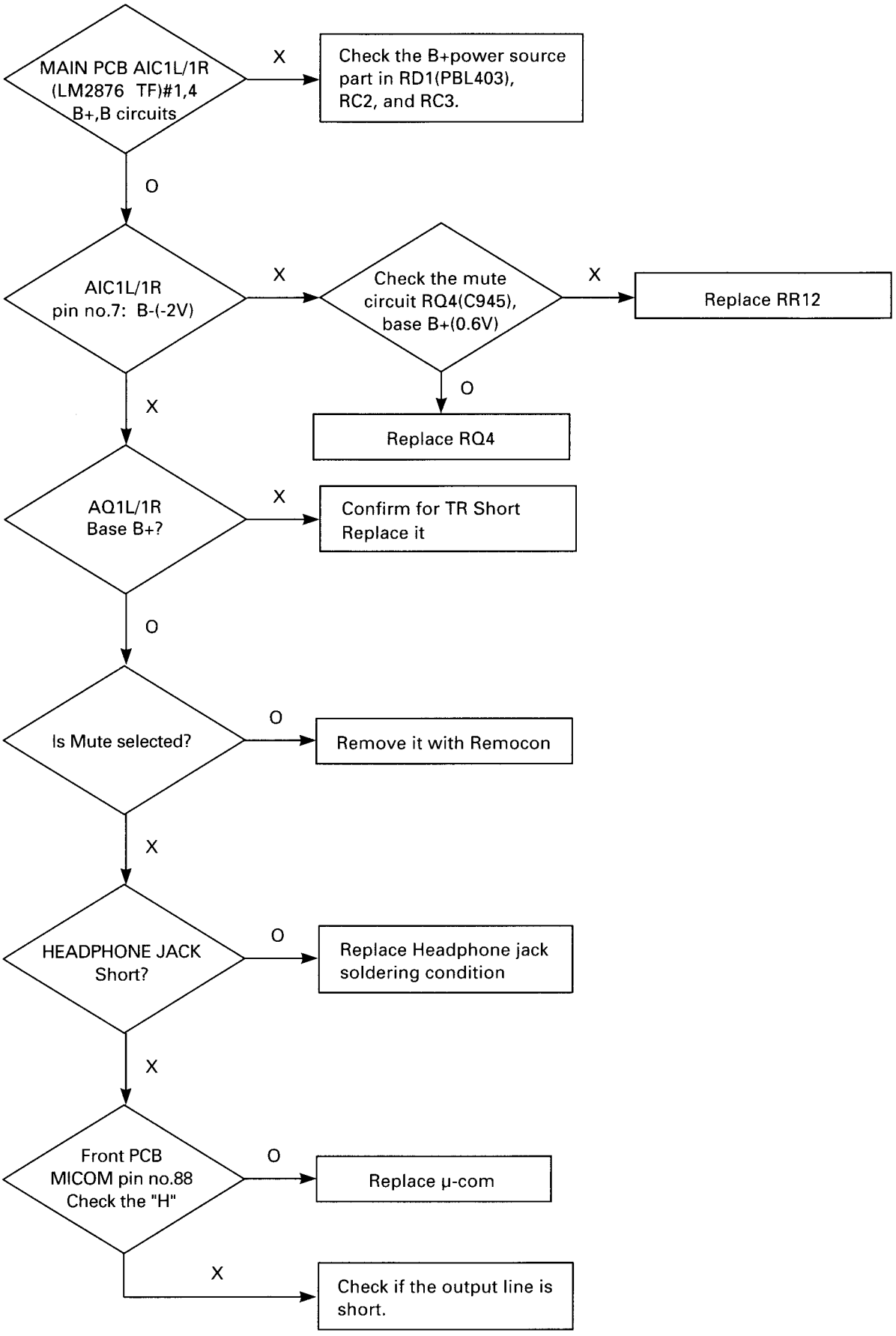
4. Troubleshooting

4-1. The Amplifier section

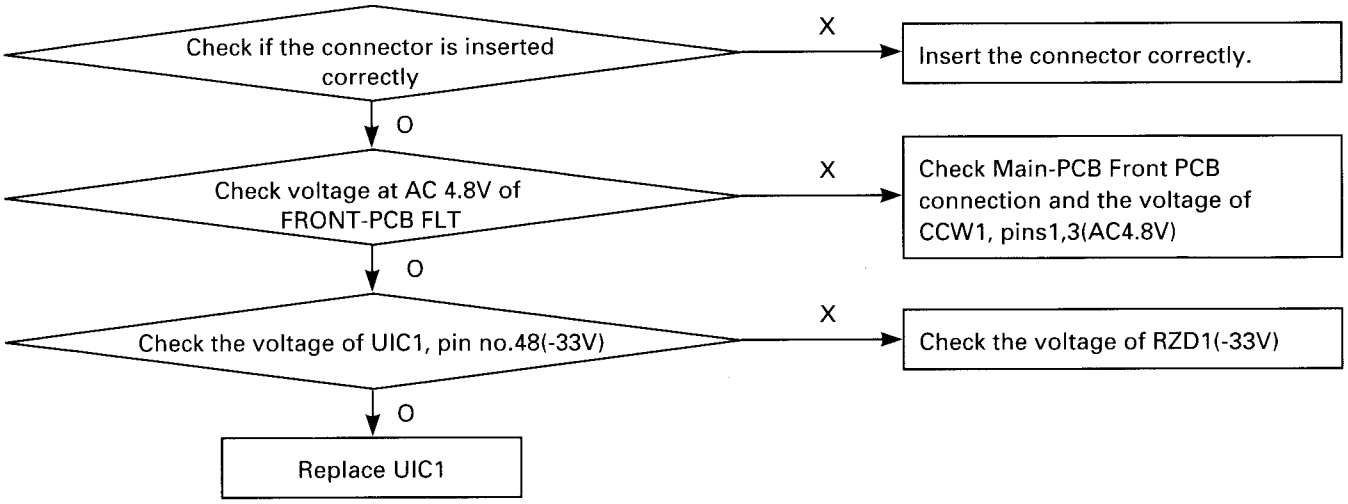
4-1-1. Power malfunction



4-1-2. No output

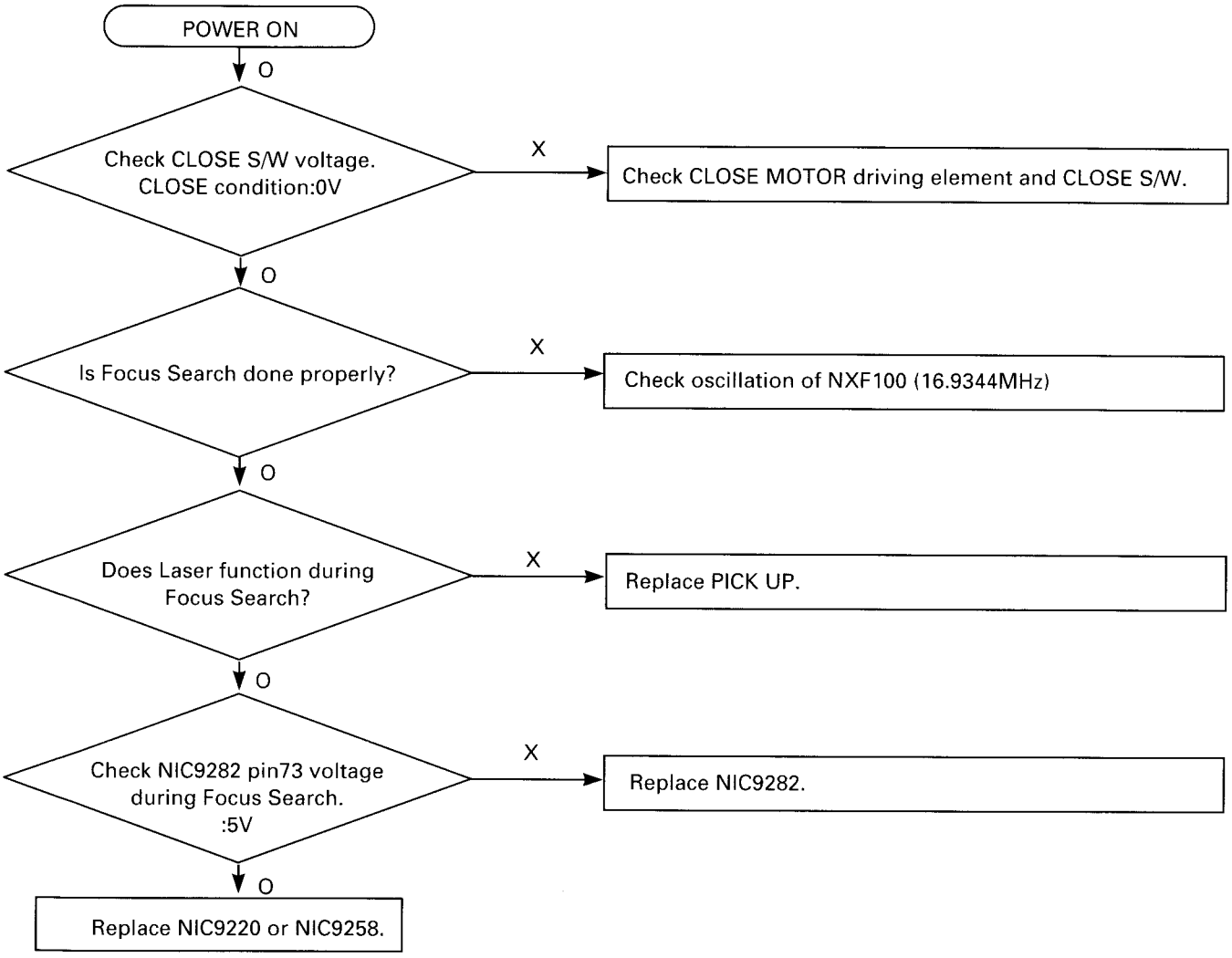


4-1-3. F.L.T Malfunction



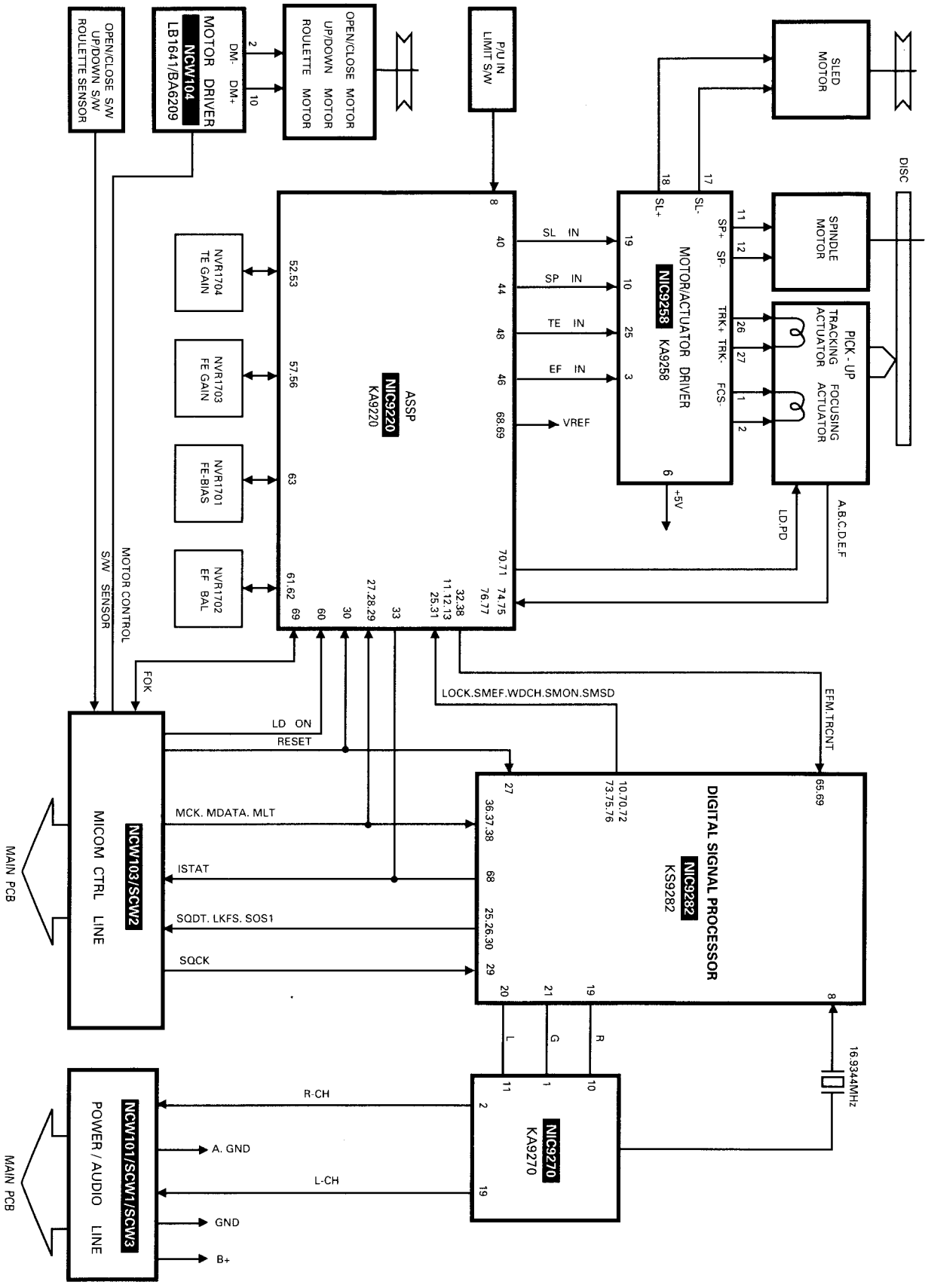
4-2. CD section

4-2-1. Malfunction of disc revolution



5. Block diagram

5-1. CD section



6. Exploded view & parts list

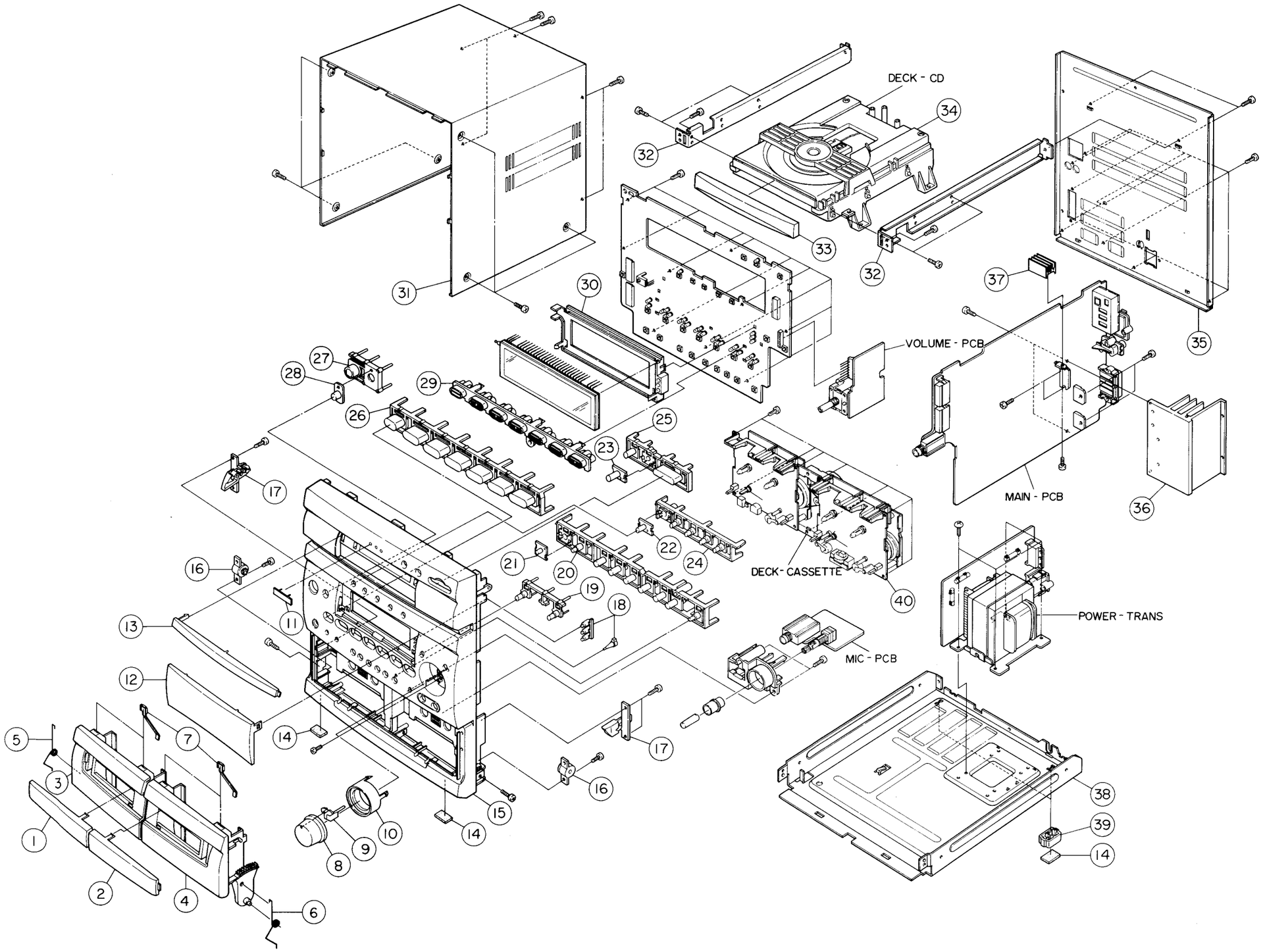
6-1. Main section

6-1-1. Parts list

● Exclutive parts

No.	Code no.	Description & Specification	Q'ty	Remark
1	14073-0242-00	WINDOW-DOOR(A) ; MAX-555/550 SMOKE PMMA 1X2	1	
2	14073-0243-00	WINDOW-DOOR(B) ; MAX-555/550 SMOKE PMMA 1X2	1	
3	14041-0127-02	DOOR-CASS(A) ; MAX-555,557/EXP ABS 94HB BLK	1	
4	14041-0128-02	DOOR-CASS(B) ; MAX-555,557/EXP ABS 94HB BLK	1	
5	12724-0181-00	SPRING-DOOR(L) ; MAX-555/550 SUS#27 PI0.8	1	
6	12724-0182-00	SPRING-DOOR(R) ; MAX-555/550 SUS#27 PI0.8	1	
7	16674-518-510	SPRING-TAPE ; SUS T0.35	4	
8	14083-0656-00	KNOB-VOLUME ; MAX-555/550 BLK ABS 1X4	1	
9	12714-0063-00	LENS-VOLUME ; MAX-555/550 PMMA TRP 1X4	1	
10	13353-0040-00	GUIDE-VOLUME ; MAX-555/550 MILKY PMMA 1X4	1	
11	14534-0011-02	BADGE-BRAND ; NEW SAMSUNG AL L30	1	
12	14073-0241-01	WINDOW-TUNER ; MAX550 PMMA VIOLET	1	●
13	14073-0244-00	WINDOW-DECO; MAX-555/550 SMOKE PMMA 1X2	1	
14	13054-0044-00	CUSHION-FOOT ; MQ570A T2.0 HH-38C	4	
15	12000-0261-02	CABINET-FRONT ; MAX-550 T2.5 BLK MIPS 94HB	1	●
16	15214-506-011	DAMPER-ASSY ; POM PD790	2	
17	12689-0009-00	LATCH-ASSY ; MAX-555 MOLD	2	
18	12714-0064-00	LENS-REC; MAX-550 PMMA MILKY 1X4	1	●
19	14083-0653-00	KNOB-MUTE ; MAX-555/550 BLK ABS 1X2	1	
20	14083-0651-00	KNOB-DECK ; MAX-555/550 BLK ABS 1X2	1	
21	12714-0059-00	LENS-BGNS ; MAX-555/550 PMMA MILKY 1X4	1	
22	12714-0060-00	LENS-EQ ; MAX-555/550 PMMA MILKY 1X4	1	
23	12714-0061-00	LENS-CD ; MAX-555/550 PMMA MILKY 1X4	1	
24	14083-0659-00	KNOB-EQ ; MAX-550 BLK ABS 1X2	1	●
25	14082-0660-01	KNOB-OPEN ; MAX550 BLK ABS	1	●
26	14082-0650-00	KNOB-FUNCTION ; MAX-555/550 TRP/BLK ABS	1	
27	14083-0652-00	KNOB-POWER ; MAX-555/550 BLK ABS 1X4	1	
28	12714-0062-00	LENS-REMOCON ; MAX-555/550 PMMA SMOKE 1X4	1	
29	13323-0188-00	HOLDER-LED ; MAX-555/550 WHT/TI02 ABS 1X2	1	
30	13323-0190-00	HOLDER-FLT ; MAX-550 BLK ABS 1X2	1	
31	12001-0257-00	CABINET-TOP ; MAX-555/550 T0.75 V/STEEL	1	
32	12213-0015-00	FRAME-CD ; MAX-550 T1.0 SECC	2	●
33	14043-0130-01	DOOR-CD ; MAX550 ABS BLK	1	
34	G3A8-1	ASSY CD PACK ; G3A8 1-CD	1	
35	12001-0260-02	CABINET-REAR ; MAX-550 SECC T0.8 EXP	1	●
36	11122-0052-00	HEAT SINK ; MAX-555/550 AL EXTR	1	
37	15684-507-610	HEAT-SINK ; AL EXTR WHT 20H, MQ6T	1	
38	12001-0258-00	CABINET-BOTTOM ; MAX-555/550 T0.8 SECC	1	
39	13004-0014-00	FOOT ; MAX-555/550 BLK ABS 1X4	2	
40	19049-0032-00	ASSY DECK TAPE ; MAX555 DECK MECHA	1	

6-1-2. Exploded view (MAX-550)



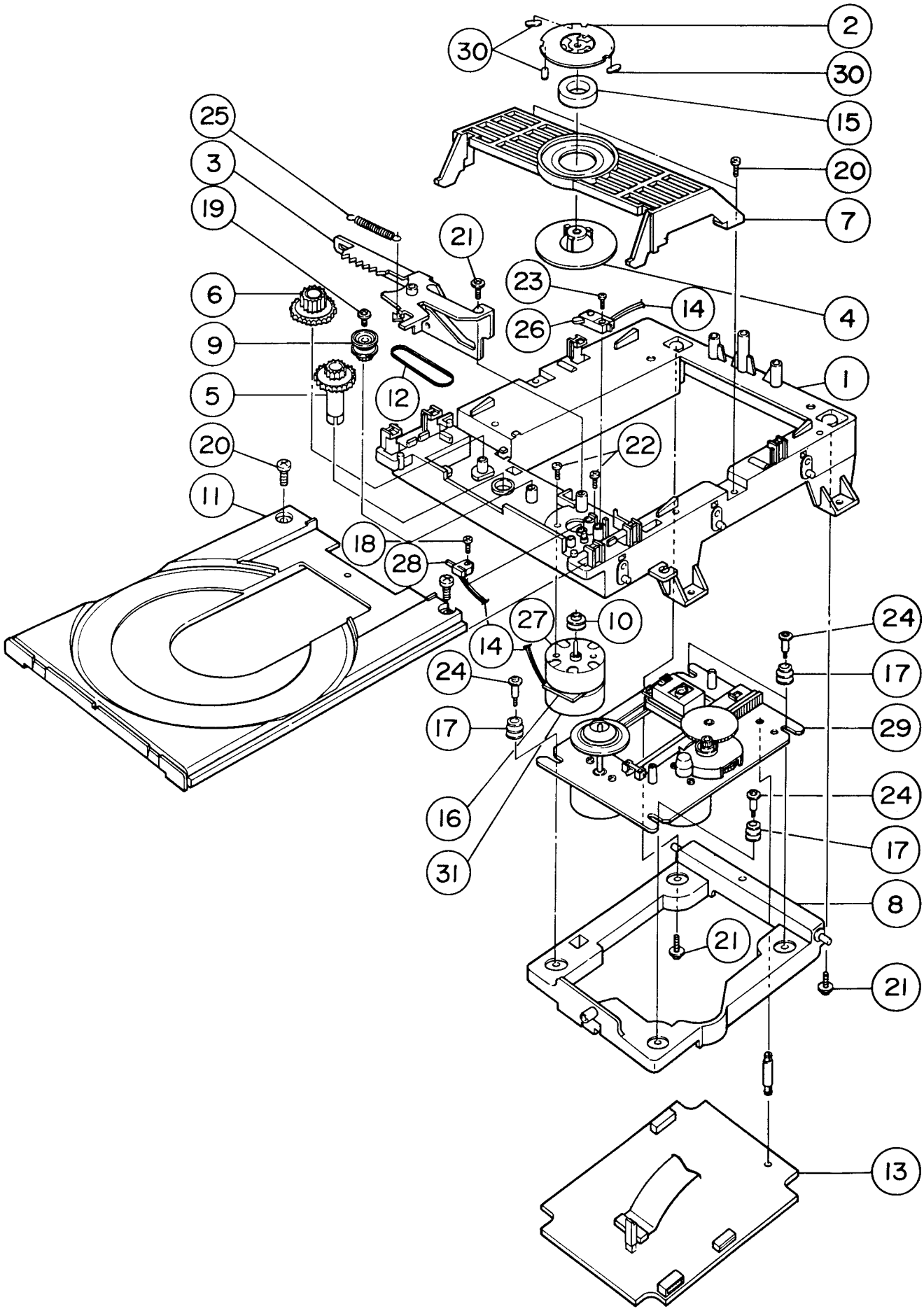
6-2. CD MECHA Exploded view& parts list

6-2-1. CD MECHA parts list (CMS-A3M6U)

No.	Code no.	Description & Specification	Q'ty	Remark
1	12201-0013-00	BASE-MAIN; ABS BLK	1	
2	13014-0119-00	BRACKET-CHUCK ; CMS-CR1 T0.8 WHT SECC	1	
3	11583-0001-00	CAM; PC BLK CMS-M1	1	
4	12223-0015-00	TABLE-CHUCK; CMS-CR3 T6.7 POM(90-02)	1	
5	11474-0006-00	GEAR(A) ; NYLON12 M0.5/M0.5 Z17/Z45 SP NTR CMS-M1	1	
6	11474-0007-00	GEAR(B) ; POM M0.5/M0.8 Z19/Z46 SP BLK CMS-M1	1	
7	13329-0013-00	HOLDER-CHUCK; ABS BLK CMS-M1	1	
8	11532-0004-00	LEVER-LIFTER DECK ; ABS BLK CMS-M1	1	
9	11504-0001-00	PULLEY-GEAR ; POM D12/M0.51 Z17 SP BLK CMS-M1	1	
10	11504-0002-00	PULLEY-MOTOR ; POM D4 BLK CMS-M1	1	
11	13602-0001-00	TRAY-M1 ; ABS BLK CMS-M1	1	
12	11494-0001-00	BELT-PULLEY ; NEOPLEN FR W1.5 T1.5/78.8 CMS-CR1	1	
13	19129-0357-01	ASS'Y CD PCB ; G3A8 1-CD	1	
14	13070-046-125	CONNECTOR-WIRE,BN ; 51004-06P/51004-06P 1007#28 350	1	
15	14014-500-600	MAGNET-CHUCK ; FERRITE 6P 250+ -20G	1	
16	16024-0083-00	PCB-MOTOR ; FR-1 T1.6 W109 L113 CMS-M1	1	
17	16174-503-411	RUBBER-CD; SI RUBBER BLU CMS-M5M6C	1	
24	15104-531-710	SHAFT-CD; FE FZY 2.6X10.5	1	
25	12724-0010-00	SPRING-CAM; STSW PI0.2 D3.2 CMS-CR1	1	
26	B3022-0004	SWITCH-LEAF ; MLS-1 DC 1.6V 1A	1	
27	B3070-0002	MOTOR-DC ; RF-500TB 9V	1	
28	13573-901-050	SWITCH-MICRO ; SPPB-11 SCDR-200	1	
29	*CMS-A30NM6	DECK-CD ;CMSA30NM6	1	

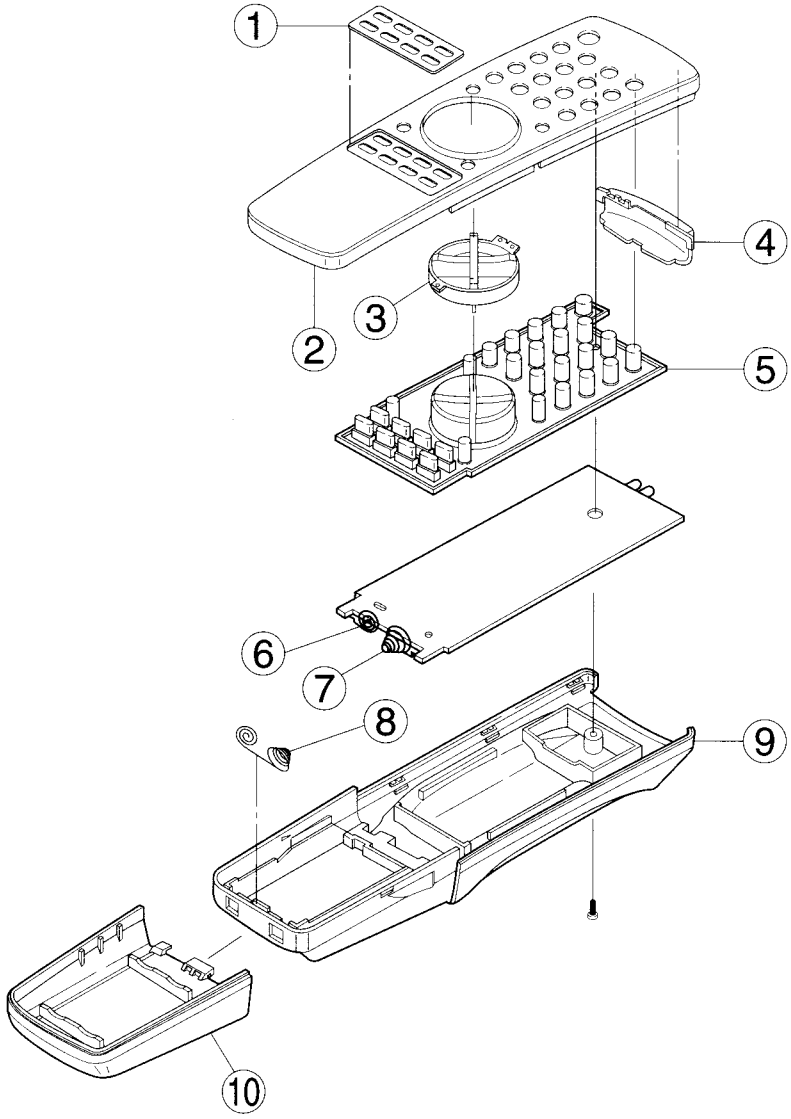
- Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

6-2-2. CD MECHA exploded view (CMS-A3M6U)



6-3. Remote control

6-3-1. Exploded view

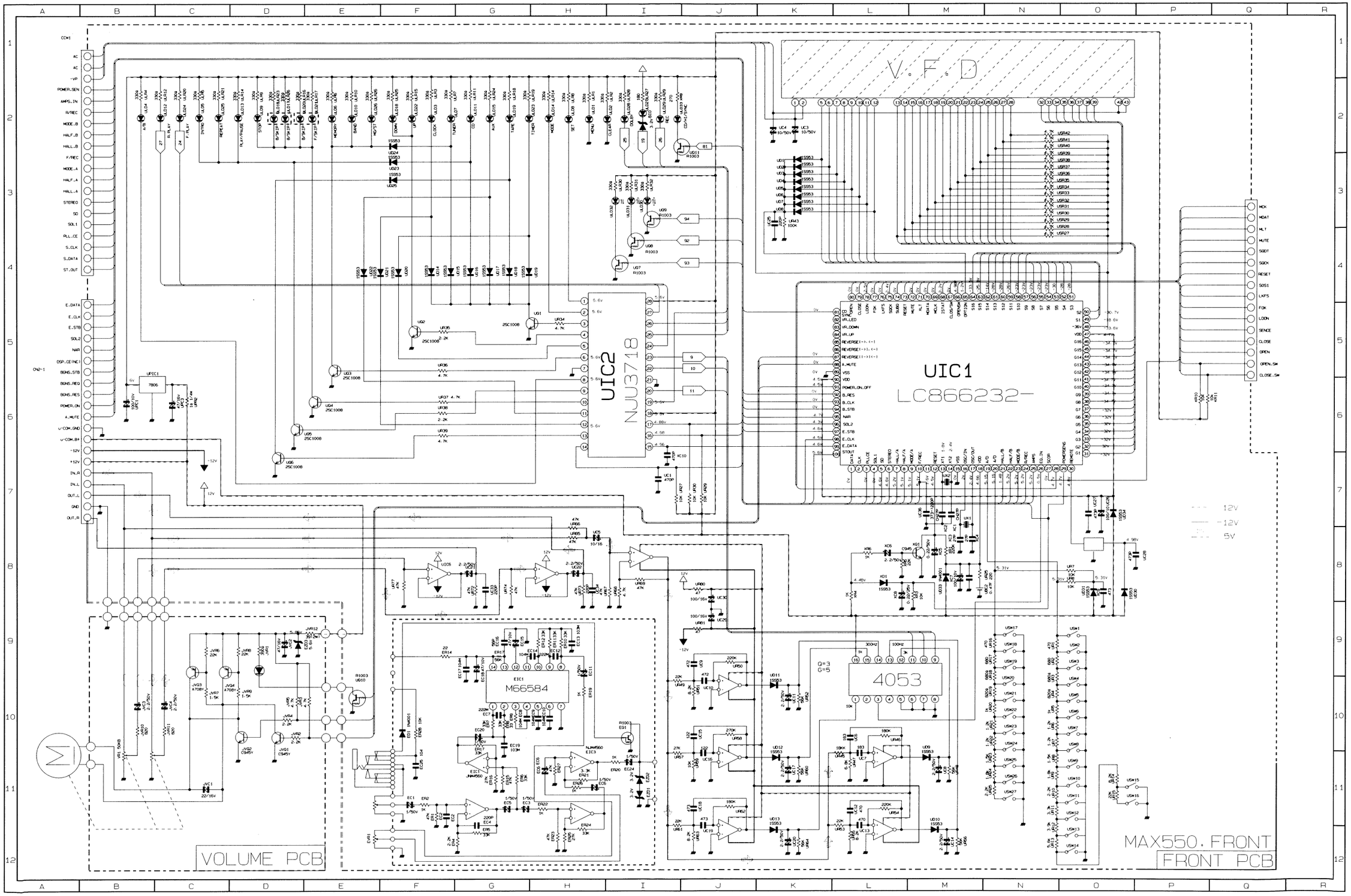


6-3-2. Parts list

No.	Code no.	Description	Specification	Q'TY	Remark
	19239-0036-02	ASS'Y REMOCON	MAX-555 EXP	1	
1	14014-0033-01	INLAY-REMOCON	MAX555 REMOCON T0.5 PC	1	
2	12001-0283-00	CABINET-TOP	MAX555 REMOCON ABS 94HB	1	
3	13353-0043-00	GUIDE-KNOB	MAX555 REMOCON ABS 94HB	1	
4	14073-0235-00	WINDOW-REMOCON	RCD1650/EXP PC	1	
5	14082-0765-01	KNOB-RUBBER	MAX555 REMOCON SILICON	1	
6	12724-0189-00	SPRING-A(+)	MM-77 STS PI0.6 CD	1	
7	12724-0190-00	SPRING-B(-)	MM-77 STS PI0.6 CS	1	
8	12724-0191-00	SPRING-C	MM-77 STS PI0.6 CS	1	
9	12001-0249-00	CABINET-BOTTOM	RCD1650/EXP REMOCON ABS 94HB	1	
10	14043-0126-00	DOOR-BATTERY	RCD1650/EXP REMOCON ABS 94HB	1	
	11449-518-101	CONDENSER AXIAL-LEAD	50V UP050 B-100K	2	
	12149-401-150	TRANSISTOR	KSD 471-Y, TAPE	1	
	14539-504-030	CERAMIC-RESONATOR	CSB4545EBL	1	
	B4012-0430	IC-LINEAR	BU2478 SOP REMOCON	1	

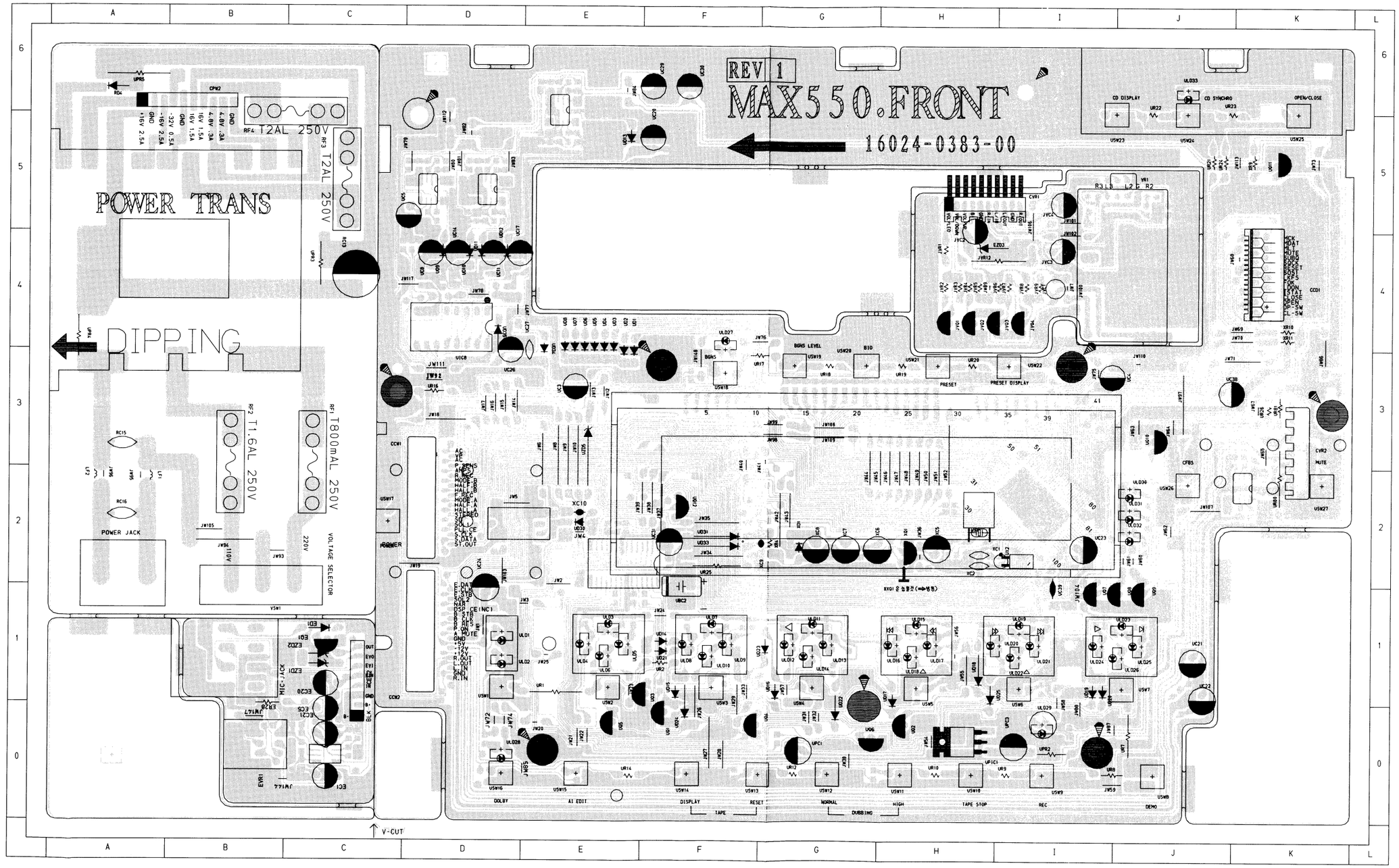
7. Schematic diagram

7-1. Front section



8. PCB Pattern and Marking diagram

8-1. Front section



*** DIODE ***

ED1 (C1)
EZD1 (C1)
EZD2 (C1)
EZD3 (H4)
RD4 (A6)
UD1 (E3)
UD10 (D4)
UD11 (D4)
UD12 (D4)
UD13 (E5)
UD14 (F1)
UD15 (F0)
UD16 (G0)
UD17 (H0)
UD18 (H1)
UD19 (I0)
UD2 (E3)
UD20 (I0)
UD21 (F1)
UD22 (G0)
UD23 (G1)
UD24 (F0)
UD25 (H0)
UD3 (E3)
UD30 (E2)
UD31 (F2)
UD33 (F2)
UD34 (E3)
UD35 (D4)
UD4 (E3)
UD5 (E3)
UD6 (E3)
UD7 (E3)
UD8 (E3)
UD9 (D4)
UZD5 (E3)
XD1 (G2)

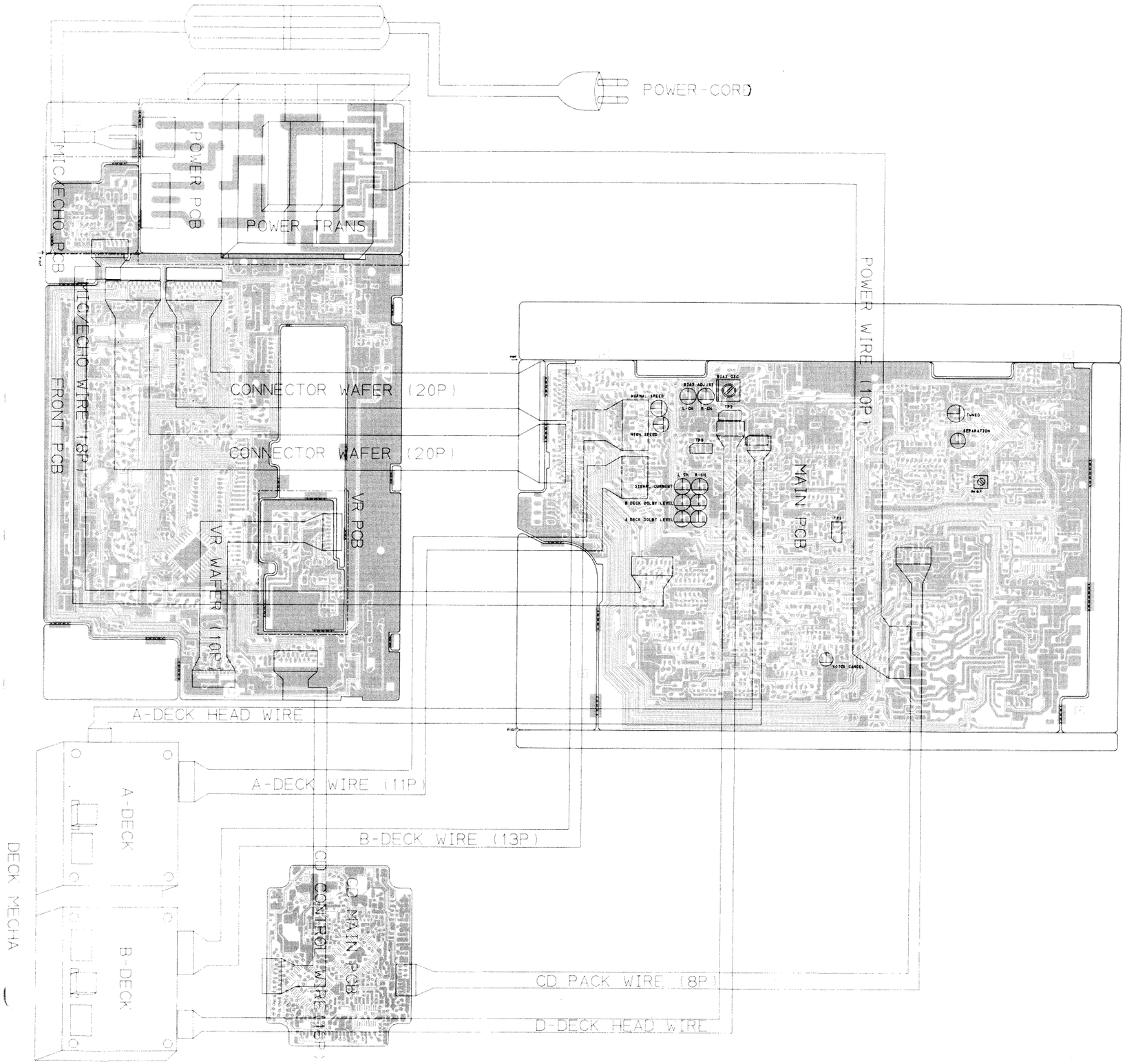
*** IC&WAFER ***

CEC2 (C1)
CPW2 (B6)
CVR1 (H5)
USW1 (D1)
USW10 (H0)
USW11 (H0)
USW12 (G0)
USW13 (G0)
USW14 (F0)
USW15 (E0)
USW16 (D0)
USW17 (C2)
USW18 (F3)
USW19 (G3)
USW2 (E1)
USW20 (G3)
USW21 (H3)
USW22 (I3)
USW23 (J6)
USW24 (J6)
USW25 (K6)
USW26 (J2)
USW27 (K2)
USW3 (F1)
USW4 (G1)
USW5 (H1)
USW6 (I1)
USW7 (J1)
USW8 (J0)
USW9 (I0)
VSW1 (B1)

*** TR ***

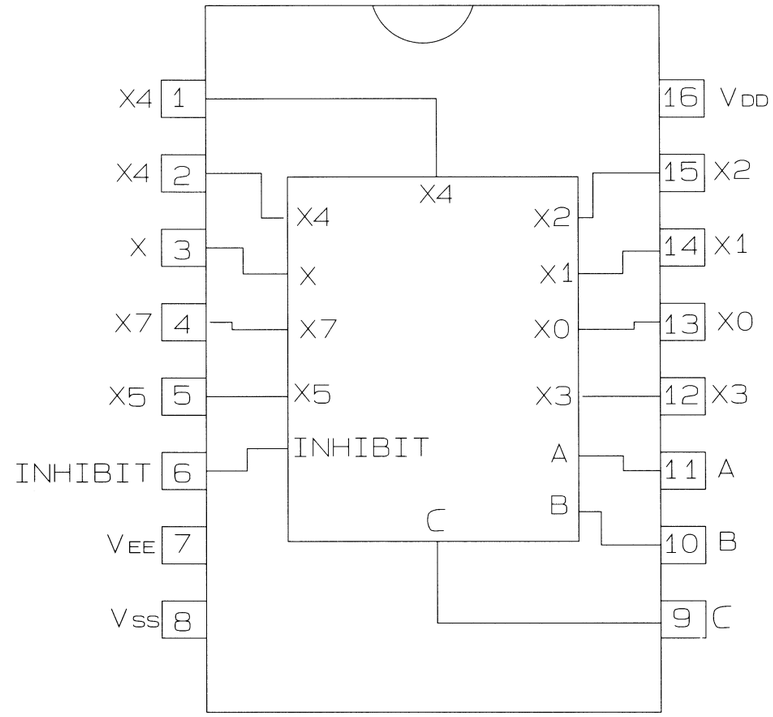
EQ1 (C1)
JVQ1 (H4)
JVQ2 (H4)
JVQ3 (I4)
JVQ4 (I4)
UPIC1 (H0)
UQ1 (F0)
UQ10 (J3)
UQ11 (K5)
UQ12 (F2)
UQ2 (H0)
UQ3 (F0)
UQ4 (F0)
UQ5 (E0)
UQ6 (H0)
UQ7 (I1)
UQ8 (J1)
UQ9 (J1)
XQ1 (H2)

9. Wiring diagram



10. IC & TR internal diagram

10-1. NJU4051B : UIC8



11. Electrical parts list

11-1. Front section

Static electricity

! indicates parts for circuit safeguarding purposes. Therefore, when replacing, be sure to use specified parts only.

Location no.	Code no.	Description & Speification	Q'ty	Remark
UPR2	11018-277-109	R-CARBON;RD 1/4T 1-J	1	
UPR3	11018-377-472	R-CARBON;RD 0.5T 4.7K-J	1	
JVR12	11048-477-390	R-METAL OXIDE;RS1T 39-J MINI TYPE	1	
UPR5	11048-577-331	R-METAL OXIDE;RS2T 330-J MINI TYPE	1	
JW151,152,150,153,155	11119-101-000	R-CHIP;SCR2012 PA.P 1/8 O-J	5	
JW156,157,UR74,77			4	
XR2,6,UR70,71,UR5	11119-101-102	R-CHIP;MCR10,1K-J	5	
UR59,XR3,7,8	11119-101-103	R-CHIP;MCR10,2012S 10K-J	4	
UR43	11119-101-104	R-CHIP;MCR10,2012S 100K-J	1	
UR6	11119-101-122	R-CHIP;SCR2012J 122 100CT	1	
UR45,69	11119-101-183	R-CHIP;SCR2012 18K-J	2	
UR46,62	11119-101-184	R-CHIP;SCR2012 180K-J	2	
UR35,38	11119-101-222	R-CHIP;MCR 10,2012S 2.2K-J	2	
XR5,UR49,53,61,15	11119-101-223	R-CHIP;MCR10,2012S 22K-J	5	
UR50,54,XR1	11119-101-224	R-CHIP;SCR2012 16V 220K-J	3	
ULR1,2,3,4,5,6,7,8	11119-101-271	R-CHIP;MCR10,2012S 270-J	8	
ULR9,10,11,12,13,14,15			7	
ULR16,17,18,19,20,21,22			7	
ULR28,23,24,25,26,30,31			7	
UR32,28,78			3	
UR57	11119-101-273	R-CHIP;MCR10,2012S 27K-J	1	
UR58	11119-101-274	R-CHIP;SCR2012J 270K	1	
UR11	11119-101-332	R-CHIP;SCR2012S 3.3K-J	1	
UR68,34,36,37,39	11119-101-472	R-CHIP;MCR 10,2012S 4.7K-J	5	
USR27,28,29,30,31,32,33	11119-101-472	R-CHIP;MCR 10,2012S 4.7K-J	8	
USR34,35,36,37,38,39,40			7	
USR42			1	
UR27,29,30,JVR10,11	11119-101-473	R-CHIP;MCR 10,2012S 47K-J	5	
UR65,66,67,31			4	
UR13	11119-101-562	R-CHIP;MCR 10 2012S 5.6K-J	1	
UR52,48,56,60,64	11119-101-563	R-CHIP;SCR2012 56K-J	5	
UR3	11119-101-681	R-CHIP;SCR2012 16V 680-J	1	
UR47	11119-101-682	R-CHIP;SCR2012 682 100CT	1	
UR4	11119-101-821	R-CHIP;MCR 10 2012S 820-J	1	
UR55,63,51	11119-101-822	R-CHIP;SCR2012 822 100CT	3	
UC6,7,15,16	11129-001-122	C-CHIP CERAMIC;SMC2012 122K	4	
UC12,13,25	11129-004-471	C-CHIP CERAMIC;SMC2012B 471K 500P	3	
UC18,19,1,28	11129-004-473	C-CHIP,CERAMIC;C2012B 473K	4	
XC3,4	11129-009-270	C-CHIP CERAMIC;C2012 CH 1H 27-J	2	
UC9,10	11129-012-472	C-CHIP CERAMIC;C2012SX7R 1H 472K	2	
XC1,2	11407-057-200	C-CERAMIC;CC45T CH 50V 20-J	2	
UC27	11417-344-473	C-CERAMIC,HK;CK45T F 50V 0.047M-Z	1	
XC9	11449-010-104	CONDENSER AXIAL-LEAD;50V UP F100000-Z	1	
XC10	11449-518-331	CONDENSER AXIAL-LEAD;50V UP050 B330-K	1	

Location no.	Code no.	Description & Speification	Q'ty	Remark
RC15,16	11469-501-070	C-CERAMIC,AC;DE 7100FZ 472P VA1-KC ALL	2	
UC5	11608-103-103	C-ELECTROLYTIC;SMS T 16V 10M(5X11)	1	
UPC2	11608-104-473	C-ELECTROLYTIC;SMS T 25V 47M(5X11)	1	
UC3,4,26	11608-106-100	C-ELECTROLYTIC;SMS T 50V 10M(5X11)	3	
UC26			1	
UC8,11,14,17,20	11608-106-222	C-ELECTROLYTIC;SMS T 50V 2.2M(5X11)	5	
XC5,8	11608-106-228	C-ELECTROLYTIC;SRE T 50V 0.22M(3X5)	2	
RC13	11608-108-104	C-ELECTROLYTIC;SMS T 100V 100M(12.5X20)	1	!
XC7	11608-152-104	C-ELECTROLYTIC;SRA T 10V 100M(6.3X7)	1	
UPC1,3,24	11608-153-101	C-ELECTROLYTIC;SRA T 16V 100M(6.3X7)	3	
JVC2	11608-153-473	C-ELECTROLYTIC;SRA T 16V 47M(6.3X7)	1	
XC6,JVC3,4,UC21,22	11608-156-229	C-ELECTROLYTIC;SRE T 50V 2.2M(3X5)	5	
UC23	11608-156-472	C-ELECTROLYTIC;SRA T 50V 4.7M(5X7)	1	
JVC1	11608-203-220	C-ELECTROLYTIC;NP SMS T 16V 22M(5X11)	1	
UIC3,4,5,6	12119-401-300	IC-OP AMP;BA4560F-T2	4	
JVQ3,4	12149-101-560	TRANSISTOR;KSA708 -Y,TAPE	2	
JVQ1,2,XQ1	12149-301-900	TRANSISTOR;KSC 945-Y,TAPE	3	
UQ1,2,3,4,5,6	12149-301-930	TRANSISTOR;KSC1008-Y,TAPE	6	
UPQ1	12149-401-150	TRANSISTOR;KSD 471-Y,TAPE	1	
UQ12	12159-301-330	TR-DIGITAL;KSR2003/KRA103M TAPE	1	
UQ7,8,9,10,11	12159-301-780	TR DIGITAL;KSR1003/KRC103M TAPE	5	
RD4	12169-201-140	DIODE;IN5392 TAPING/R	1	!
UD25,30,31,33,34	12169-301-290	DIODE-SW;1SS53/1N4148,CT:6PF	5	
UD9,10,11,12,13,14,15,16			8	
UD17,18,19,20,21,22,23,24			8	
UD1,2,3,4,5,6,7,8			8	
XD1			1	
UZD1,EZD3	12169-404-110	DIODE-ZN;RD5.6FB/UZP-5.6B	2	
	13323-0190-00	HOLDER-FLT;MAX-550 BLK ABS 1X2	1	
CVR2	13349-170-101	CONNECTOR-WAFER;52170-1010	1	
CVR1	13349-171-101	CONNECTOR-WAFER;53114-1010	1	
USW1,2,3,4,5,6,7,8	13559-901-100	SWITCH-TACT;SKHV10910A	8	
USW9,10,11,12,13,14,15,16			8	
USW18,19,20,21,22,23,24,25	13559-901-100	SWITCH-TACT;SKHV10910A	8	
USW26,27			2	
USW17			1	
UX2	14539-502-350	X-TAL;32.768KHZ 1		
CPW2	16439-0088-00	CONNECTOR WIRE-BSS;51088-10/5264-10	1	
UX1	A1280-0017	CRYSTAL;12MHZ HC-49/U-A 50PPM DV-60	1	
ULD1,2,3,7,11,15,19,23	A4150-0288	LED-LAMP;SLR34DCN49 ORG T PI2.5	8	
ULD30,31,32			3	
ULD6,10,14,18,22,26,8	A4150-0289	LED-LAMP;SLR34YCN49 YEL T PI2.5	7	
ULD4,5,9,12,13,16,17	A4150-0290	LED-LAMP;SLR34PCN49 GRN T PI2.5	7	
ULD20,21,24,25,27,28,29,33			8	
VFD	A4153-0072	V.F.DISPLAY;BJ-259GK AUDIO	1	
VR1	B1050-0013	VR-ROTARY,METAL;RK16812MGL0UA 50KB	1	
UBC2	B1104-0540	C-ELEC;CE 92 W 5.5V T 473-Z FMOH473	1	
REMOCON EYE	B1294-0043	MODULE-REMOCON;GP1U271R 38KHZ 12NM	1	

Location no.	Code no.	Description & Speification	Q'ty	Remark
UIC1	B4000-0017	IC-OTP;LC86P6232 DIP	1	
UIC2	B4004-0388	IC-LOGIC;NJU3718 SOP BULK	1	
JIC8	B4004-0393	IC-LOGIC;NJU4051B MAX555 SOP	1	
CCW1,2	B6010-1489	CONNECTOR-WAFER;52724-2010 WHT	2	
	B6010-1549	CONNECTOR-FPC;52492-1620 WHT J/MOLE	1	
RC15,16	11469-501-070	C-CERAMIC,AC;DE 7100FZ 472P VA1-KC	2	
LF1,2	12429-010-330	COIL-CHOKE,RND;27UH-K Q30 F2R5	2	
	13059-808-061	POWER CORD SET;KKP-419C/KKS-15 KLCE	1	Option ⚠
RF1,2,3,4	13164-101-913	CLIP-FUSE;PBP 3-1/2H T0.3 SN	8	" ⚠
RF1	14709-241-190	FUSE;T 250V 800MA 20EUR	1	" ⚠
RF3,4	14709-241-250	FUSE;T 250V 2A 20 EUR	2	⚠
POWER TRANS	A1199-0138	TRANS-POWER;EI74X42 115/230V 50/60Hz	1	⚠

11-2. CD section

Location no.	Code no.	Description & Speification	Q'ty	Remark
NR555	11058-277-229	R-FUSIBLE;RF 1/4T 2.2-J	1	
NR606,611,608,609,610	11119-101-000	R-CHIP;SCR2012 PA.P 1/8 O-J	5	
NR102,109,205,45L,45R	11119-101-102	R-CHIP;MCR10,1K-J	5	
NR47L,47R,104,203,NRD	11119-101-104	R-CHIP;MCR10,2012S 100K-J	5	
NR42L,42R,114	11119-101-105	R-CHIP;MCR10,2012S 1M-J	3	
NR41L,41R,204,191,100	11119-101-123	R-CHIP;SCR2012J123 100CT	5	
NR190			1	
NR106,107	11119-101-124	R-CHIP;SCR2012 120K-J	2	
NR110	11119-101-153	R-CHIP;SCR2012J153 100CT	1	
NR103,119	11119-101-154	R-CHIP;MCR 10,2012S 150K-J	2	
NR115	11119-101-184	R-CHIP;SCR2012 180K-J	1	
NR101	11119-101-220	R-CHIP;SCR2012J 220 100CT	1	
NR40L,40R	11119-101-223	R-CHIP;MCR10,2012S 22K-J	2	
NR43L,43R,200	11119-101-273	R-CHIP;MCR10,2012S 27K-J	3	
NR201,202	11119-101-332	R-CHIP;SCR2012S 3.3K-J	2	
NR105	11119-101-393	R-CHIP;SCR2012 10V 39K-J	1	
NR117	11119-101-434	R-CHIP;MCR 10,2012S 430K-J	1	
NR44L,44R,46L,46R	11119-101-472	R-CHIP;MCR 10,2012S 4.7K-J	4	
NR111,108	11119-101-473	R-CHIP;MCR 10,2012S 47K-J	2	
NR112	11119-101-563	R-CHIP;SCR2012 56K-J	1	
NR605	11119-101-683	R-CHIP;SCR2012J 683 100CT	1	
NR113	11119-101-822	R-CHIP;SCR2012 822 100CT	1	
NR116	11119-101-824	R-CHIP;SCR2012 824J	1	
NR118	11119-102-820	R-CHIP;SCR2012 1/8 PL,P 82-F	1	
NC204,124	11128-018-474	C-CHIP CERAMIC;GRM40 Y5V 474Z16-530	2	
NC119,120,121,107,108	11129-001-104	C-CHIP CERAMIC;2012 SL 104-K 50V	5	
NC603			1	
NC41L,41R	11129-001-122	C-CHIP CERAMIC;SMC2012 122K	2	
NC1000,1001	11129-001-151	C-CHIP,CERAMIC;C2012 SL 1H 151K	2	
NC118	11129-001-331	C-CHIP CERAMIC;C2012 SL 1H 331K	1	
NC113,125,101	11129-001-333	C-CHIP CERAMIC;SMC2012 333K	3	
NC109,104,42R,43L	11129-004-102	C-CHIP CERAMIC;C2012 X7R 1H 102K	4	
NC205,110,116,102,103	11129-004-103	C-CHIP CERAMIC;SMC2012B 103K 500P	5	
43R,44L,500,600,601,602			6	
NC201	11129-004-152	C-CHIP CERAMIC;SMC2012B 152K 500P	1	
NC112	11129-004-222	C-CHIP CERAMIC;C2012X7R 1H222K	1	
NC200	11129-004-473	C-CHIP,CERAMIC;C2012B 473K	1	
NC111	11129-004-682	C-CHIP CERAMIC;C2012 X7R 1H 682K	1	
NC115	11129-004-683	C-CHIP CERAMIC;SMC2012B 683K 500P	1	
NC190	11129-009-080	C-CHIP CERAMIC;SMC 2012 CH 080 J50P	1	
NC202,203	11129-009-270	C-CHIP CERAMIC;C2012 CH 1H 27-J	2	
NC100	11129-012-472	C-CHIP CERAMIC;C2012SX7R 1H 472K	1	
NC45R,46L	11129-019-561	C-CHIP CERAMIC;SMC2012 PA.P 16V 561K	2	
NL100	11176-600-040	COIL-CHIP;LQH3C 101K(5)	1	
NVR1702,1703,1704	11249-102-043	VR-SEMI TAPE-V;EVN-DCA A03B24(20K)	3	

Location no.	Code no.	Description & Specification	Q'ty	Remark
NVR1701	11249-102-063	VR-SEMI TAPE-V;EVN-DCA A03B54(50K)	1	
	11532-0004-01	LEVER-LIFTER DECK;CMSP3 BLK PC	1	
NC703	11608-102-224	C-ELECTROLYTIC;SMS T 10V 220M(6.3X11)	1	
NC114	11608-103-103	C-ELECTROLYTIC;SMS T 16V 10M(5X11)	1	
NC117	11608-106-471	C-ELECTROLYTIC;SMS T 50V 0.47M(5X11)	1	
NC700,701,702,105	11608-152-101	C-ELECTROLYTIC;SRE T 10V 100M(6.3X5)	4	
NC42L	11608-153-470	C-ELECTROLYTIC;SRE T 16V 47M(6.3X5)	1	
NC45L,44R,40L,40R,122	11608-154-479	C-ELECTROLYTIC;SRE T 25V 4.7M(3X5) 5		
	12074-0024-00	SHIELD-PLATE;MM-77 T0.3 SPTE	1	
NIC1641	12119-203-500	IC MOTOR DRIVER;LB1641	1	
NIC05	12119-601-160	IC-REGULATOR;TA78L005/MC 78L05AC	1	
NQ1501	12139-201-100	TRANSISTOR;KSA928A-Y/KTA1273-Y TAPE	1	
NQ1502	12149-202-050	TRANSISTOR;KSB564A-Y	1	
NQ1503	12159-301-780	TR DIGITAL;KSR1003/KRC103M TAPE	1	
ND200,201,202,203	12169-301-290	DIODE-SW;1SS53/1N4148,CT:6PF	4	
NZD101	12169-404-800	DIODE ZENER;500MW UZ-6.2BSB TAPING	1	
	13324-0209-00	HOLDER-PCB;MM77 DAHP-18N	1	
NCW104	13349-139-061	CONNECTOR-WAFER;53015-0610 2.0MM	1	
NCW101	13349-139-080	CONNECTOR-WAFER;53015-0810 2.0MM	1	
NS100	13564-601-100	SWITCH-LEAF;MSW-1731CVC	1	
NXF100	14539-503-083	CERAMIC-RESONATOR;CSA 16.93MX040-TF	1	
NC2000	A1100-0909	C-CERAMIC;CC 73 COG 16V T 040-J C20	1	
NIC9270	A4012-0089	IC-LINEAR;KA9270D SOP AUDIO FILTER	1	
NIC9258	A4012-0169	IC-LINEAR;KA9258 SOP CD-4CH DRIVER	1	
NIC9220	A4012-0290	IC-LINEAR;KA9220 QFP RF+SSP	1	
NIC9282	A4012-0291	IC-LINEAR;KS9282 QFP DSP+DAC+DPLL	1	
NCW100	A6010-1523	CONNECTOR-WAFER;00-6200-167-012-800	1	
NCW103	A6010-1525	CONNECTOR-WAFER;28-6216-016-100-808	1	
	A6032-0066	WIRE-PLATE;16/90 SFBNCD-P=1.0-K-16-82	1	

SAMSUNG

Basic Model : MAX-555

CHANGE NOTES.

*** Refer to Table of Contents**

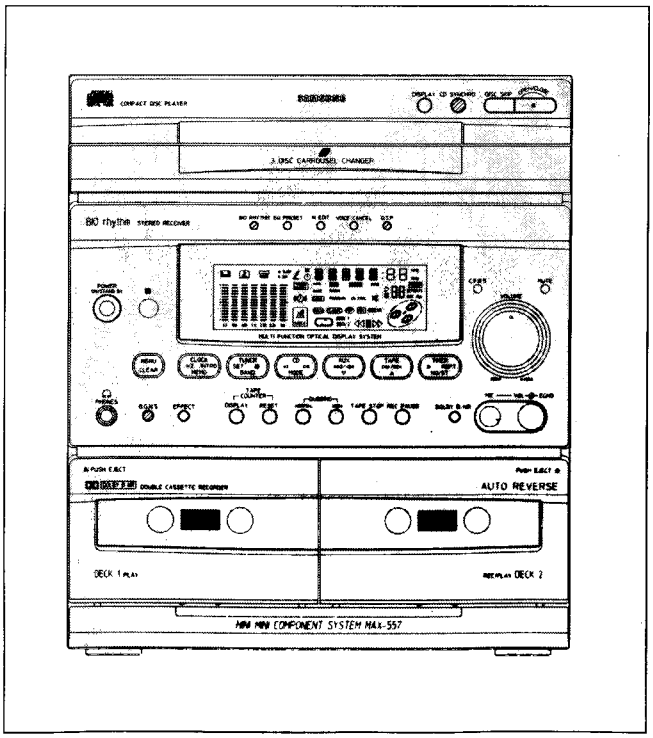
MAX-557

SERVICE Manual SUPPLEMENT-1

Supplement to the Service Manual MAX-557

This supplement contains change notes differing from the Service Manual MAX-555

use both this supplement and the Service Manual parts number 14739-0118-00



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12. Electrical parts list ..... 25~27

Code No.: 14739-0118-02

1. Specification

1-1. General section

1-1-1. Power source ····· 230V 50Hz
1-1-2. Power consumption ····· 172W
1-1-3. Dimension ····· 270(W)X333(D)X317(H)

1-2. Amp section

1-2-1. Power output ····· 40W(D.T 10%)
1-2-2. Frequency response ····· 20Hz~20kHz(±3 dB)
1-2-3. Signal to noise ratio ····· 70 dB
1-2-4. Separation ····· 60 dB

1-3. Radio section

1-3-1. FM section

(1) Frequency range ····· 87.5MHz~108MHz
(2) Usable sensitivity ····· 6μV
(3) Signal to noise ratio ····· 65 dB
(4) Separation(STEREO) ····· 35 dB

1-3-2. MW section

(1) Frequecny range ····· 522~1611kHz
(2) Signal to nois ratio ····· 40 dB
(3) Usable sensitivity ····· 600μV

1-3-3. LW section(Option)

(1) Frequecny range ····· 146~290kHz
(2) Signal to nois ratio ····· 35 dB
(3) Usable sensitivity ····· 1000μV

1-4. Cassette deck section

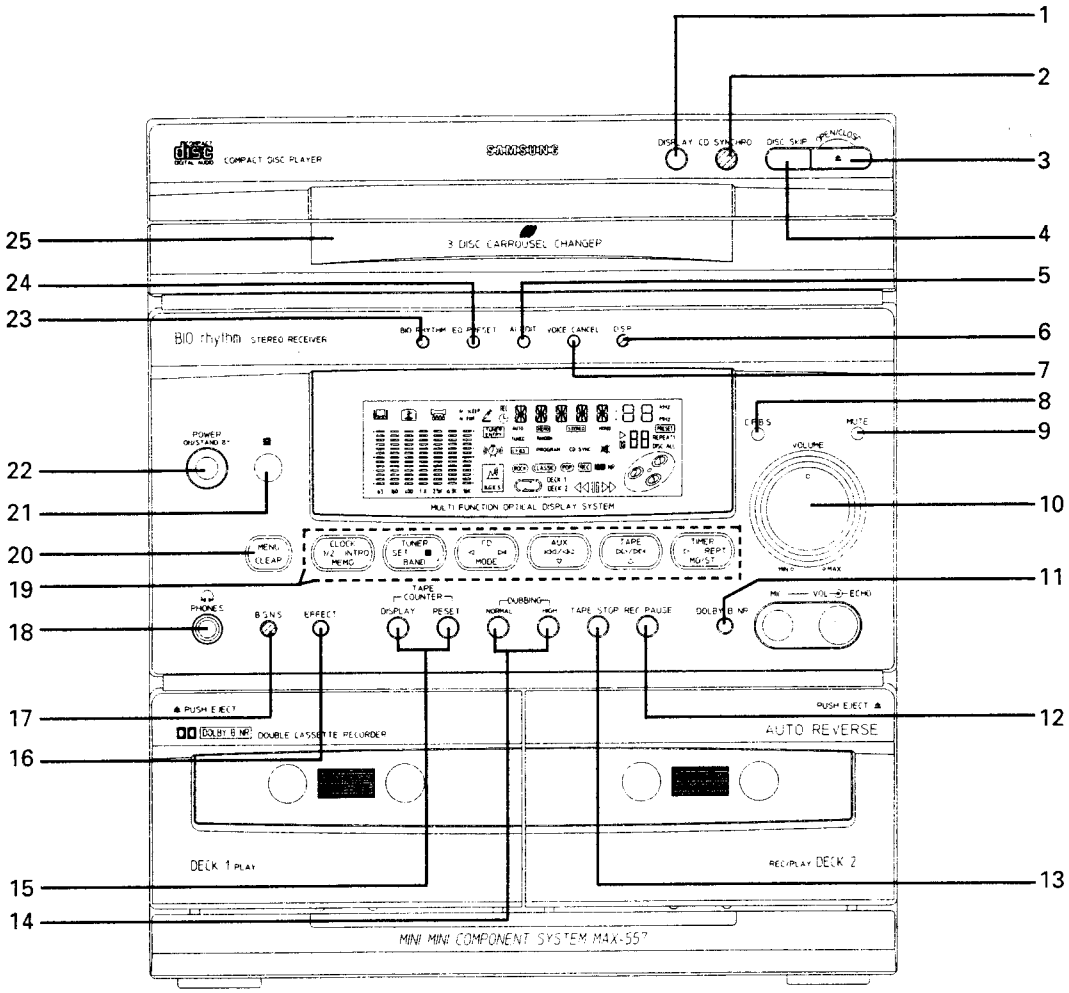
1-4-1. Frequency range ····· 125Hz~12.5kHz
1-4-2. Signal to noise ratio ····· 45 dB
1-4-3. Separation(STEREO) ····· 35 dB
1-4-4. Total harmonic distortion ····· 3%(Recording mode)
1-4-5. Erasing effect ····· 65 dB

1-5. Compact disc section

(1) Frequency range ····· 20Hz~20kHz(±1dB)
(2) Signal to noise ratio ····· 90 dB(1kHz 0 dB)
(3) Channel separation ····· 80 dB(1kHz 0 dB)
(4) Total harmonic distortion ····· 0.05%(1kHz 0 dB)
(5) D/A conversion ····· 1 bit

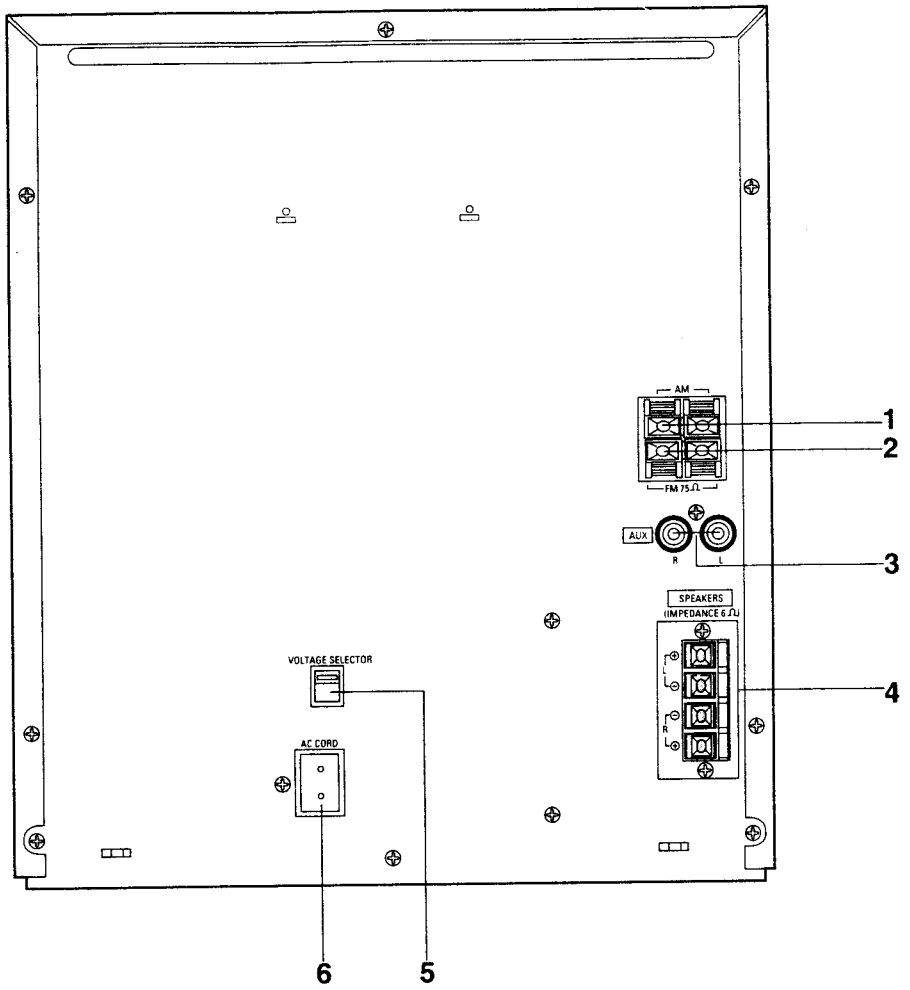
2. Location of controls

2-1. Front view



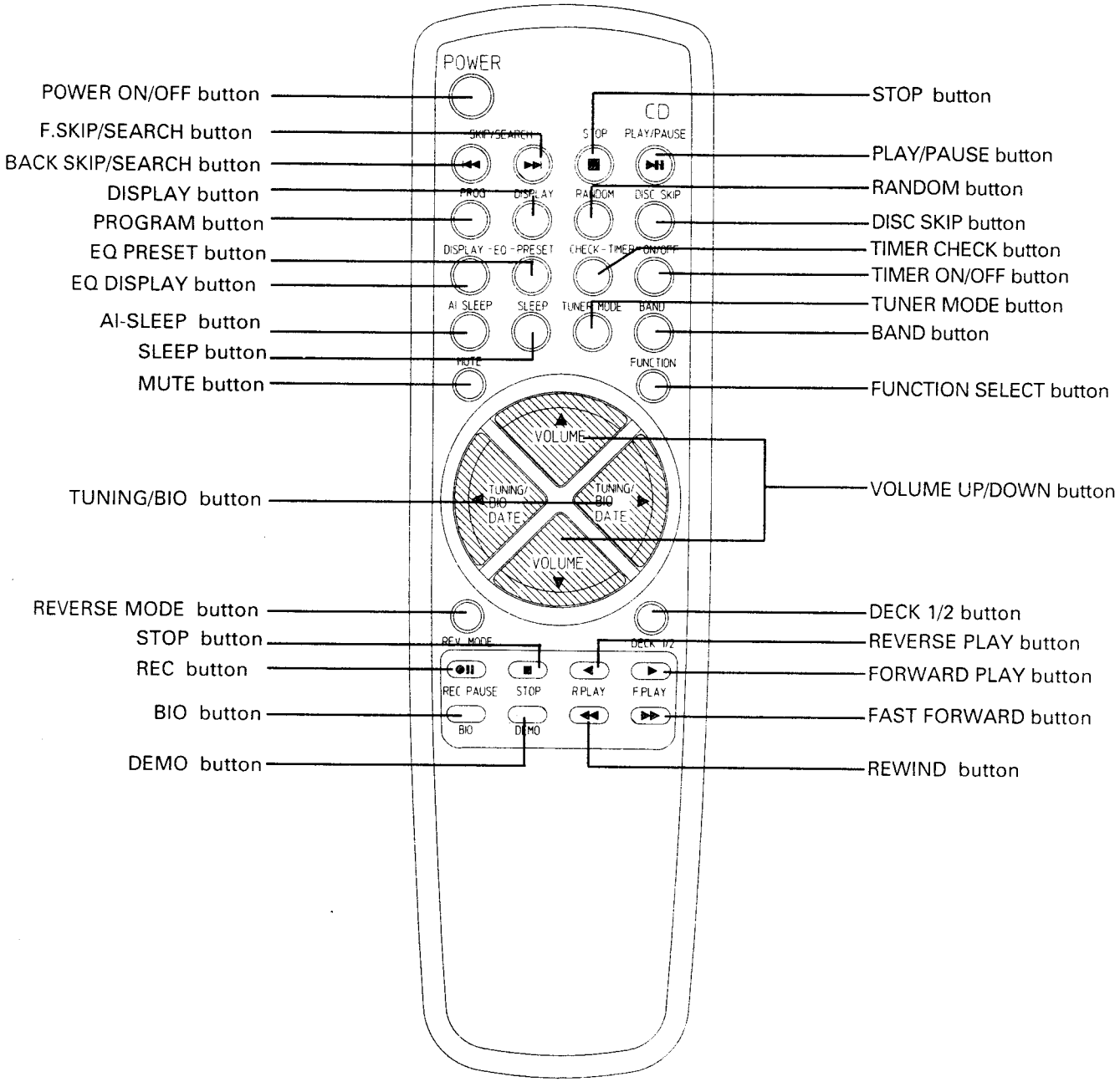
1. DISPLAY button
2. CD SYNCHRO button
3. OPEN/CLOSE button
4. DISC SKIP button
5. AI EDIT button
6. D.S.P button
7. Voice cancel button
8. C.F.B.S button
9. MUTE button
10. VOLUME
11. DOLBY B NR button
12. REC PAUSE button
13. TAPE STOP button
14. DUBBING button
15. TAPE COUNTER DISPLAY/RESET button
16. EFFECT button
17. B.G.N.S button
18. PHONE jack
19. MULTI FUNCTION button
20. MENU/CLEAR button
21. REMOTE sensor
22. POWER button
23. BIO RHYTHM button
24. EQ PRESET button
25. DISC TRAY

2-2. Rear view



1. AM ANTENNA terminal
2. FM ANTENNA terminal
3. AUX jack
4. SPEAKER terminal
5. VOLTAGE SELECTOR (option)
6. AC CORD CONNECTOR

2-3. Remote control



3. Basic circuit operation

3-1. CD section

3-1-1. KA9220 (RF + SSP) : WIC01

Pin No.	Name	Description
1	AVEE(R)	Analog negative power supply input pin for RF part.
2	CPH	Capacitor connection pin of mirror hold.
3	CBH	Capacitor connection pin of defect bottom-hold
4	TESTD	Defect test pin
5	TESTM	Mirror test pin
6	Test1	Input pin for test
7	PFSET	Peak frequency setting pin for focus, tracking compensation and fc (cut off frequency) of CLV LPF
8	SSTOP	Check the position pin of pick-up whether inside or not.
9	DIRC	Direct 1 Track Jump Control Pin
10	AVCC	Analog positive power supply input pin for SERVO part.
11	WDCH	Auto-sequencer clock-input pin(Normal speed = 88.2KHz, Double speed=176.4KHz)
12	SMPD	Connection pin of DSP SMPD
13	SMON	Connection pin of DSP SMON, spindle servo ON at "H"
14	N/C	No connection pin
15	TGSW	Providing time constant to change the high frequency tracking gain
16	RTG	Capacitor connection pin to switch the tracking gain of high frequency
17	LFR	Capacitor connection pin to perform rising low bandwidth of focus servo loop
18	FSW	High frequency gain of focus servo loop can be changed by FS3 switch ON or OFF
19	HFGD	Reducing high frequency gain with capacitor connected between pin 18 and pin 19.
20	FSCH	Time constant external pin to generate focus search waveform
21	VREGI	External regulator voltage input pin for VCO
22	ISET	Determining the peak value of focus search,track jump and SLED kick
23	VREG	3.5V Regulator output pin
24	FVC	Pin connected external resistor to adjust free running frequency of VCO
25	SMEF	Providing an external LPF time constant of CLV SERVO Loop
26	BPF	Providing time constant for Loop filter of VCO
27	MCK	Clock input pin from μ-com
28	MLT	Latch input pin from μ-com
29	MDAT	Data input pin from μ-com
30	RESET	Reset input pin from μ-com, reset at "L"
31	LOCK	Pin for operation of the sled runaway prevention function at "L"
32	TRCNT	Track count output pin
33	ISTAT	Internal status output pin
34	AVEE	Analog negative power supply input pin for SERVO part
35	APDI	Input pin of DSP phase comparison output (PHAS)
36	F8M	Output pin of analog VCO Normal speedc= 8.64 MHz, Double speed = 17.28MHz
37	AASC	Auto-Asymmetry control input pin
38	EFMO	EFM Comparator output pin
39	SLEN	Non-inverting input pin of SLED SERVO amplifier
40	SLEO	Output pin of SLED SERVO amplifier
41	SLEI	Inverting input pin of SLED SERVO amplifer
42	TEST2	Test input pin to change speed mode Normal speed="H", Double speed="L"
43	SPDI	Inverting input pin of spindle servo amplifier
44	SPDLO	Spindle servo amplifier output pin
45	FCE	Invering input pin of focus servo complifier.
46	FSE0	Output pin of focus sevoe amplifier
47	TKEI	Non-inverting input pin of tracking servo amplifier
48	TKE0	Output pin of tracking servo amplifier
49	N/C	No connection
50	ATS	Anti-shock input pin

Pin No.	Name	Description
51	TZC	Tracking Zero Crossing input pin
52	TE2	Tracking Error Servo input pin
53	TE1	Output pin of tracking Error Amplifier
54	TDFCT	Capacitor Connection pin for Defect Compensation of tracking servo
55	DVCC	Digital positive power supply input pin for servo part
56	FE2	Focus error servo input pin
57	FE1	Output pin of focus error Amplifier
58	FDFCT	Capacitor connection pin for defect compensation of focus servo
59	FOK	Output pin of Focus ok comparator.
60	LDON	Laser diode ON/OFF control pin
61	EI	Feedback input pin of E I-V amplifier
62	EO	Output pin of E I-V amplifier
63	FBIAS	Bias pin of non-inverting input of focus error amplifier
64	DVEE	Digital negative power supply input pin for servo part
65	RFI	Output Signal of RF summing amplifier is inputed through capacitor
66	RFO	Output pin of RF summing amplifier
67	RF-	Inverting input pin of RF summing amplifier
68	RV	Output pin of (AVCC + AVEE)/2 Voltage
69	CV	Bias input pin of Center Voltage Buffer
70	LD	Output pin of APC amplifier
71	PD	Input pin of APC amplifier
72	AVCC	Analog positive power supply input pin for RF part
73	N/C	No connection
74	PD2	Inverting input pin of RF I-V AMP2
75	PD1	Inverting input pin of RF I-V AMP1
76	F	Inverting input pin of F I-V AMP
77	E	Inverting input pin of E I-V AMP
78	P/N	Selecting P-sub/N-sub of Laser diode
79	DCC2	Defect bottom-hold output is inputed through capacitor
80	DCC1	Output pin of defect bottom-hold

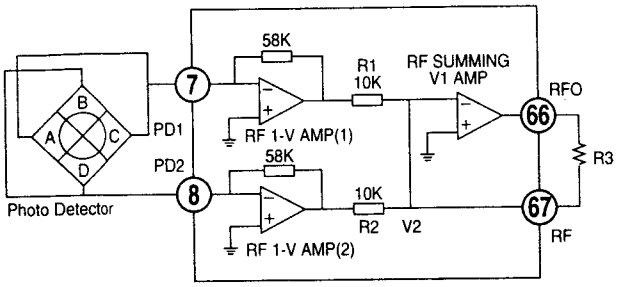
3-1-2. KS9283 (Digital Signal Processor) : WIC02

Pin no.	Symbol	I/O	Description
1	AVDD 1		Analog Vcc1
2	DPDO	O	Charge pump output for master PLL
3	DPFIN	I	Filter input for master PLL
4	DPFOUT	O	Fiter output for master PLL
5	CNTVOL	I	VCO Control Voltage for master PLL
6	AVSS1		Analog Ground1
7	DATX	O	Digital audio output
8	XIN	I	X-tal oscillator input
9	XOUT	O	X-tal oscillator input
10	WDCH1	O	Word clock of 48 bit/SLOT
11	LRCH1	O	Channel clock of 48 bit/SLOT
12	ADTA1	O	Serial audio data output of 48 bit/SLOT(MSB first)
13	DVss1		Digital Ground1
14	BCK1	O	Audio data Bit clock for 48 bit/SLOT
15	C2PO	O	C2 pointer for output audio data
16	TIM2	O	Normal and Double Speed Control pin
17	/BCK1	O	Clock of BCK1
18	/BCK2	O	Clock of BCK2
19	BCK2	O	Audio data Bit clock of 64 Bit/SLOT
20	LRCH2	O	Channel clock of 64 Bit/SLOT
21	ADATA2	O	Serial audio data output of 64 Bit/SLOT(LSB First)
22	N.C		No connection
23	WDCH2	O	Word clock of 64 Bit/SLOT
24	EMPH	O	Emphasis/Non-Emphasis output ("H": Emphasis)
25	LKFS	O	The Lock status,output of frame Sync
26	SOS1	O	Output of subcode sync signal (S0 + S1)
27	RESET	O	System reset at "L"
28	SQEN	O	SQCK I/O Control("L": internal CK, "H": external CK)
29	SQCK	I/O	Clock for outpur subcode-Q data
30	SQDT	O	Serial output of subcode-Q data
31	SQOK	O	The CRC Check result signal output of subcode-Q
32	SBCK	I	Clock for output subcode-Q data
33	SDAT	O	Subcode Serial data output
34	DVDD		Digital Vcc1
35	MUTE	I	Mute control input ("H": Mute ON)
36	MLT	I	Latch signal input from Micom
37	MDAT	I	Serial clock input from Micom
38	MCK	I	Serial clock input from Micom
39	DB8	I/O	SRAM data I/O Port 8(MSB)
40	DB7	I/O	" 7
41	DB6	I/O	" 6
42	DB5	I/O	" 5
43	DB4	I/O	" 4
44	DB3	I/O	" 3
45	DB2	I/O	" 2
46	DB1	I/O	" 1 (LSB)
47	C1F1	I/O	Monitoring output for C1 error Correction (RA1)
48	C1F2	I/O	" (RA2)
49	C2F1	I/O	Monitoring outpur for C2 error Correction (RA3)
50	C2F2	I/O	" (RA4)

Pin no.	Symbol	I/O	Description
51	C2FL	I/O	C2 decoder flag (High: When the processing C2 code is impossible correction stage) (RA5)
52	/PBCK	I/O	Output of VCO/2 (Normal speed = 4.3218MHz) (Double speed = 8.6436MHz) (RA6)
53	DVSS2		Digital Ground 2
54	FSDW	I/O	Unprotected frame Sync(RA7)
55	ULKFS	I/O	Frame sync protection state (RA8)
56	/JIT	I/O	Display of either RAM overflow or under flow for ±4 frame Jitter margin (RA9)
57	C4M	I/O	Only Monitoring signal (Normal Playback: 4,2336MHz) (RA10)
58	C16M	I/O	16.9344MHz signal outpur(RA11)
59	/WE	I/O	Terminal for test
60	/CS	I/O	"
61	SEL1	I	Mode Selection Terminal 1(H: 33.8688MHz) (L: 16.9344MHz)
62	SEL2	I	" 2(H: APLL) (L: DPLL)
63	/SEL3	I	" 3(H: CDROM) (L: CDP)
64	/SEL4	I	" 4
65	TEST	I	Test Terminal(L: Normal operation state)
66	EFMI	I	EFM Siganl input
67	APDO1	O	Charge Pump output for analog PLL
68	/ISTAT	O	The internal status output
69	TRCNT	I	Tracking counter input signal
70	LOCK	O	output signal of LKFS condition sampled PBFR/16 (If LKFS is "H", Lock is "H". If the LKFS is sampled ":L" at least 8times by PBFR/16, Lock is "L")
71	PBFR	O	Write frame clock(Lock: 7.35KHz)
72	SMEF	O	LPF time constant control of the spindle servo error signal
73	SMON	O	ON/OFF control signal for spindle servo
74	DVDD2	O	Digital Vcc2
75	SMPD	O	Spindle Motor drive (Rough control in the CLV-S mode Phase control in the CLV-P mode)
76	SMSD	O	Spindle Motor drive (Velocity control in the CLV-P mode)
77	VC001	O	Vco output signal (When the state is Lock by means of PBFR it is 8.6436MHz)
78	VCOI1	I	VCO input signal
79	Dspeed	I	Double speed mode control (H: Normal speed) (L: Double speed)
80	APDO2	O	Analog PLL charge pump output for Double speed mode

3-2. CD section

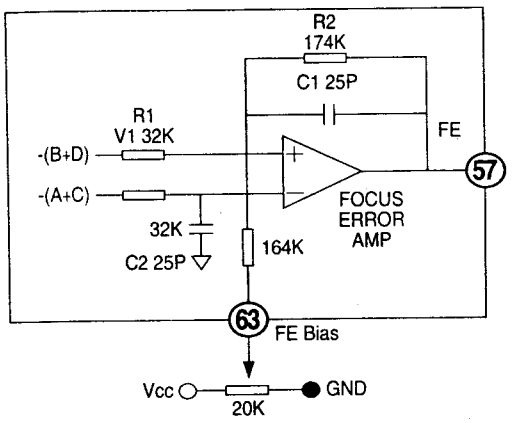
1) RF Amp(KA9220) : WIC01



RF I-V Amp(1) and RF I-V Amp (2) are converted to voltage via internal resistance of 58kΩ from the current of PD1(A+C) and PD2 (B+D) ; then, this voltage is added to RF summing amplifier. The signal (A+B+C+D) is applied to RFO (No.2 terminal). RF output voltage can be calculated as follows:

VRF = -R3 x (iPD1 + iPD2)
=-R3 x (V1/R1 + V2/R2)
=-R3 x (V1/10K + V2/10K)
=-R3/10K x (V1 + V2)

2) FOCUS ERROR Amp(KA9220) : WIC01



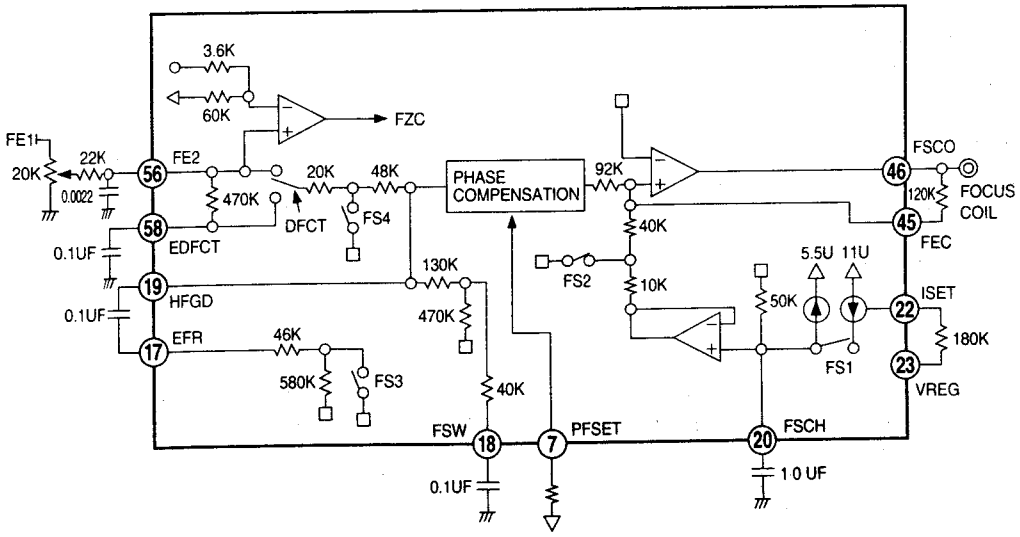
FOCUS ERROR Amp is the circuit which amplifies the difference between RF I-V Amp(1) output(A+C) and RF I-V Amp(2) output (B+D).
These two signals are supplied to (-) and (+) input terminals of FOCUS ERROR Amp. The FOCUS ERROR signal resulting from this difference voltage is applied to FE (Terminal No. 57). The FE output voltage of this low frequency component varies depending on { (A+C) - (B+D) }. VFE can be obtained as follows.

VFE = (R2/R1) x (V2-V1) = 5.4(V2-V1)

This FOCUS ERROR voltage is sent to FOCUS SERVO circuit to maintain optimum focusing.

3) FOCUS SERVO SYSTEM(KA9220) :WIC01

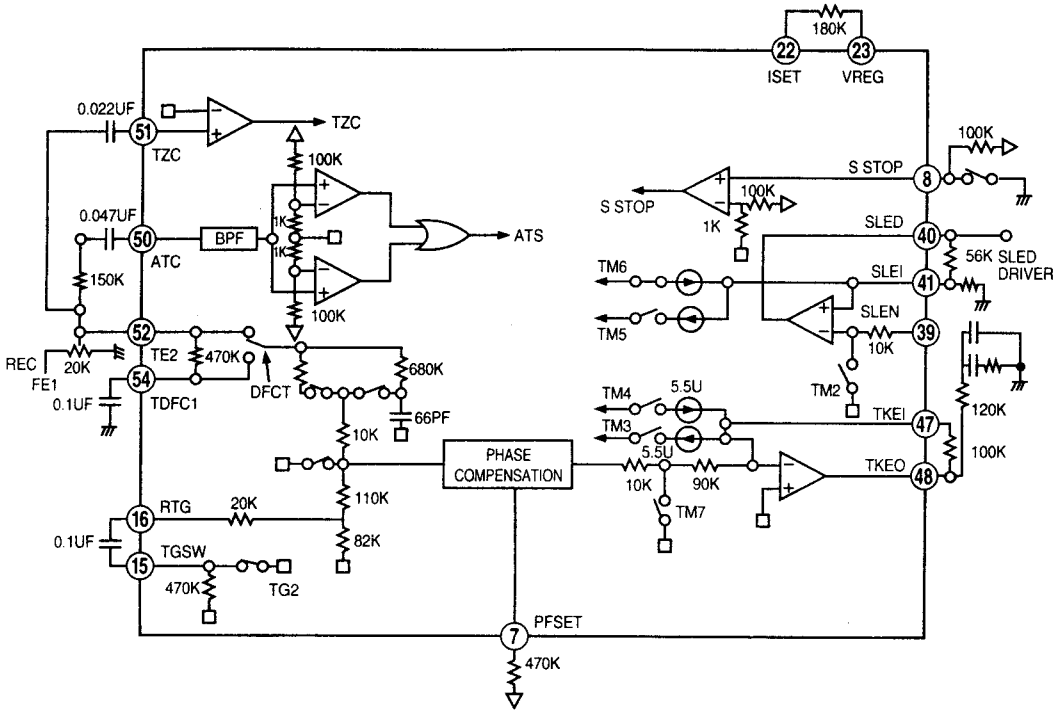
The diagram of Focus Servo System is shown in the following.
When FS3 is ON, high frequency gain decreases in the form of low frequency time constant by pin 17, pin 19, and capacitor connected to internal resistance.
The capacitor between pin18 and GND has the time constant picking up the low frequency operated in PLAY mode.



The maximum frequency of focus phase compensation is inversely proportional to the resistance connected to pin7.
Focus search peak is about 1.1 Vp-p, and is inversely proportional to the resistance connected to pin22,23 ; however, if this resistance changes, the peak of track jump and sled kick changes.
The inversion input of FZC comparator is set to 5.7% of the difference between Vcc and VC(pin69) { 5.7% x (Vcc -VC) }.
Note: If the resistance connected to pin 7 changes, the phase compensation peak of focus, tracking, sled servo changes. At the same time, 'op-amp' dynamic range and offset voltage also change.

4) TRACKING SLED SERVO SYSTEM(KA9220) : WIC01

The diagram of Tracking Sled Servo System is shown in the following. The capacitor between pin15 and 16 has a time constant, and lowers the high frequency when TG2 is off. The maximum frequency of tracking phase compensation is inversely proportional to the resistance connected to pin7(about 1.2KHz at 470K). The tracking jump in the direction of FWD and REV is decided when TM3 and TM4 are ON, and the peak voltage induced from tracking coil is decided by the both TM3 and TM4 current values, and feed back resistance of pin47.
Track jump max. Voltage= TM3(TM4) current x feedback resistance.

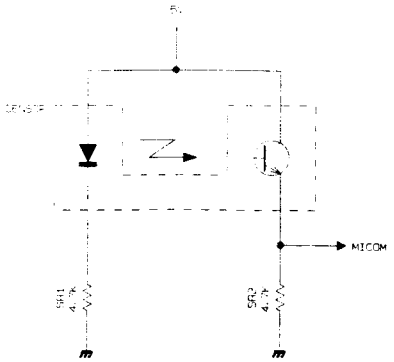


FWD or REV sled kick is carried out when TM5 of TM6 is ON , and the peak voltage added to sled motor is decided by TM5 or TM current and the feedback resistance of pin no. 41.
Sled jump max. voltage = TM5(TM6) current x feedback resistance.
Each SW current is decided by the resistance connected to pin no.22 and 23.
When the resistance is about 150kΩ.

TM3 or TM4 = 11μA ;
TM5 or TM6 = 22μA.

This current is value is almost inversely proportional to the resistor, variable within a range of about 5 to 40μA for TM3.
STOP is the ON/OFF detection signal for the limit SW or the sled motor's innermost circumference.

5) ROULETTE CONTROL SENSOR

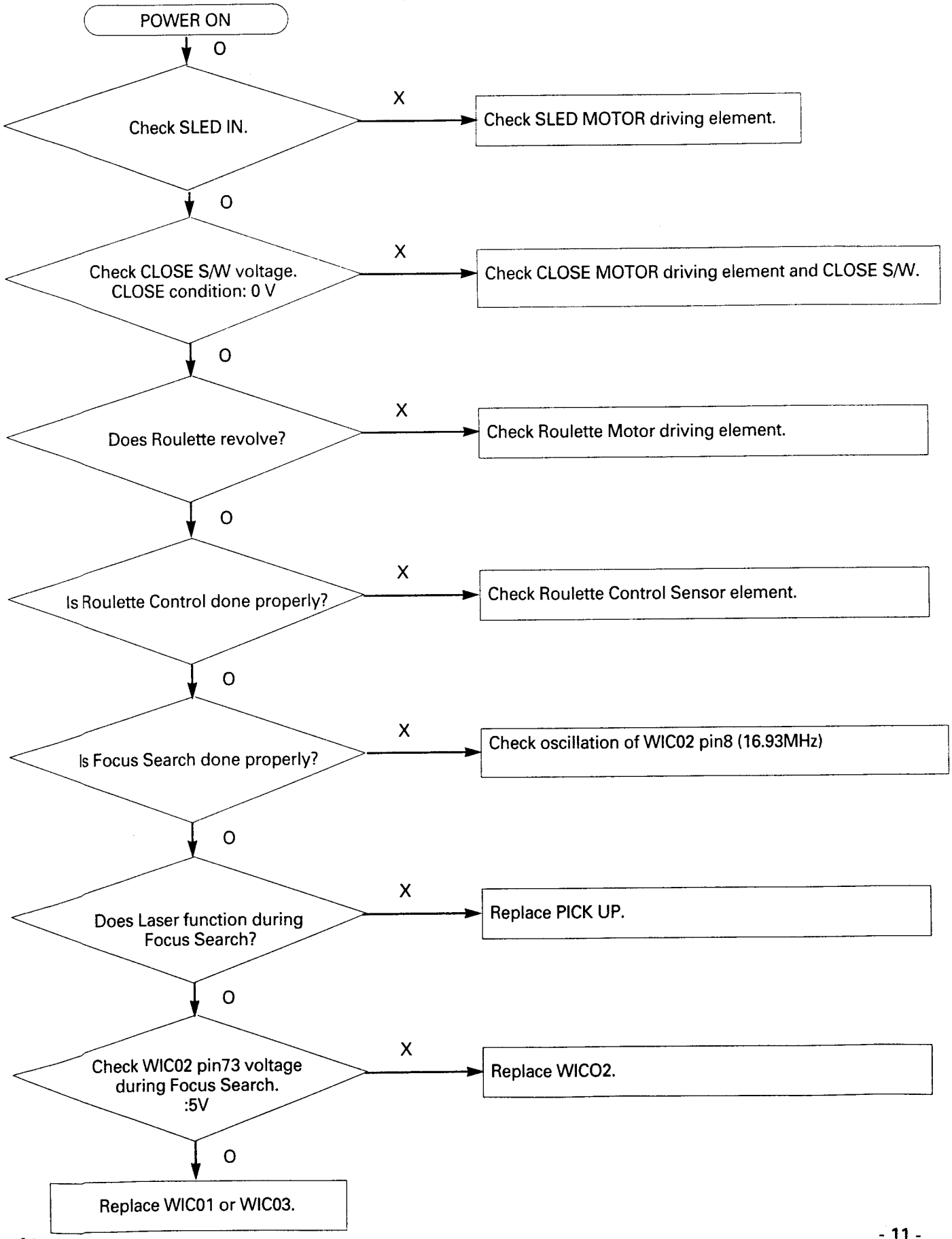


This sensor is composed of infrared LED (illuminator)and PHOTO IR(receptor),and PHOTO TR is ON or OFF when infrared rays are transmitted or blocked by the irregularity of the wing in the bottom of ROULETTE. BY ON/OFF of PHOTO TR, the Pulse signal which is ROULETTE control signal is applied to μ-com.

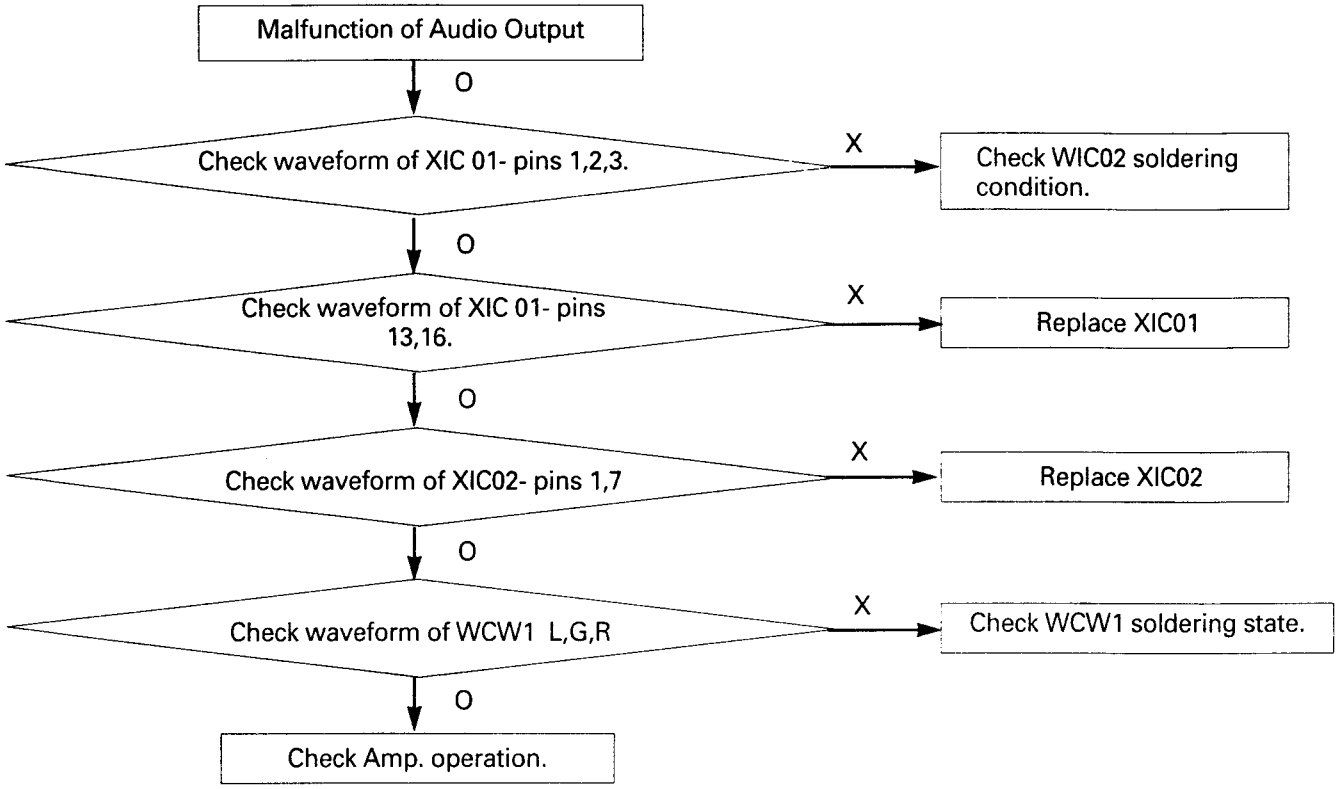
4. Troubleshootiong

4-1. CD section

4-1-1.Malfunction of DISC Revolution

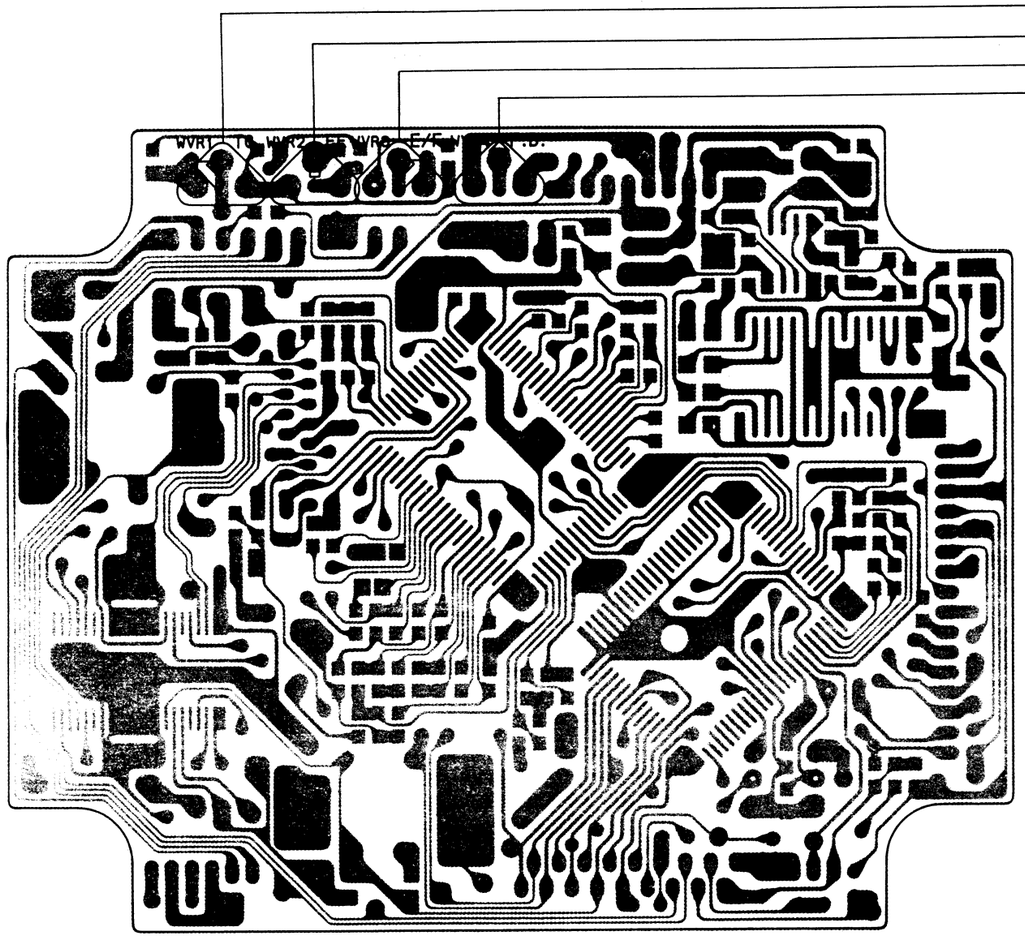


4-1-2. Malfunction of Audio Output



5. Adjustment

5-1. CD section



5-1-1. To Adjust FOCUS BIAS (STOP mode)

1) Set Volt/Div of the oscilloscope at DC 100mV.
2) In GND condition of the oscilloscope, set the waveform at 0V, and then set it in the DC range.
3) Connect the GND disconnector of the oscilloscope at VREF, and (+) disconnector to AP1.
4) By using WVR4 set it at 0mV.

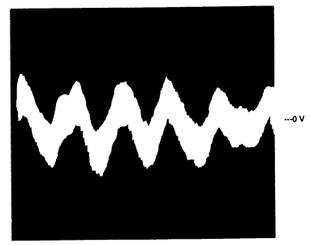
5-1-2. To adjust tracking gain (PLAY mode)

1) Connect;GND disconnector of the oscilloscope to VREF and (+)disconnector to AP2.
2) Load and play the disc.
3) While the disc is running adjust the gain with WVR1 as shown in the following figure.

(Normal freqency)

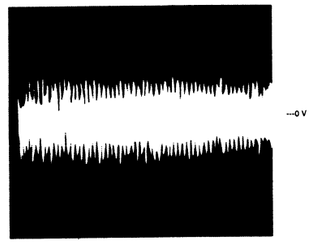
VOLT/DIV: 0.2V
TIME/DIV: 2mS

(Low frequency)



VOLT/DIV: 0.2V
TIME/DIV: 2mS

(High frequency)



VOLT/DIV:0.2V
TIME/DIV:2mS

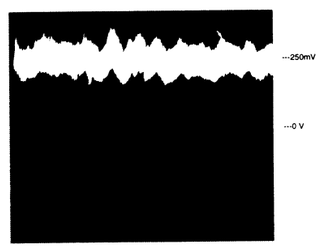
5-1-3. To Adjust Focus gain (PLAY mode)

1) Connect;GND disconnector of the oscilloscope to VREF and (+)disconnector to AP1.
2) Load and play the disc.
3) While the disc is running adjust the gain with WVR2 as shown in the following figure.

(Normal freqency)

VOLT/DIV: 0V
TIME/DIV: 2mS

(Low frequency)



VOLT/DIV: 0.1V
TIME/DIV: 2mS

(High frequency)

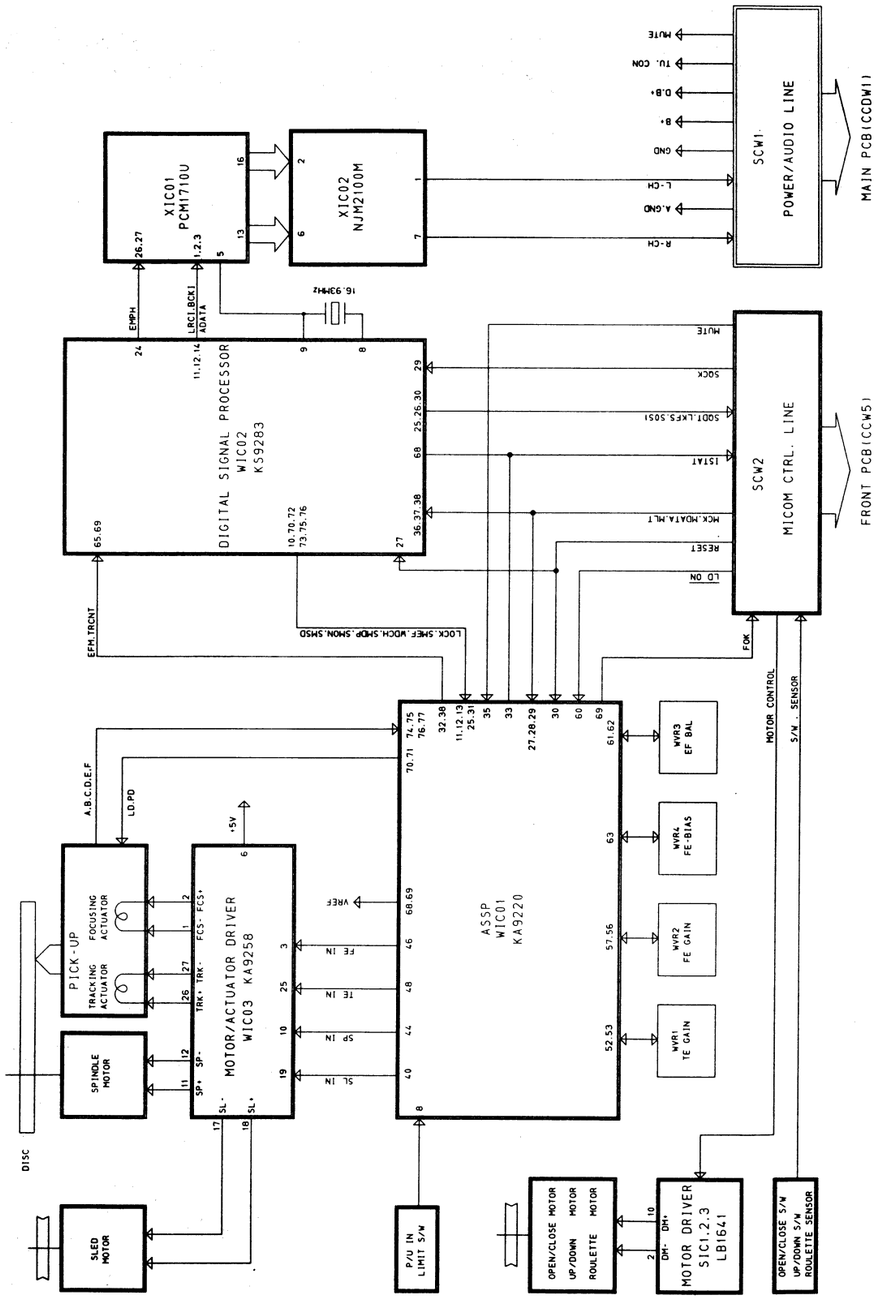
VOLT/DIV:0.1V
TIME/DIV:2mS

5-1-4. To adjust E/F balance (PLAY mode)

1) Set TIME/DIV of the oscilloscope at 2mS.
2) Set Volt/DIV of the oscilloscope at 0.5V.
3) At GND setting of the oscilloscope set the waveform at 0v and then set it in the DC range.
4) Connect;GND disconnector of the oscilloscope to VREF and (+)disconnector to AP2.
5) Load and play the disc.
6) Turn WVR1 counterclockwise to the minimum value.
7) Raise WVR3 and adjust the waveform so that the middle of wave comes to the GND of the oscilloscope or until the upper half of waveform becomes symmetrical to the buttom half. (A=B)
8) Adjust WVR1 in the arrow direction to achieve a normal sound effect.

6. Block diagram

6-1. CD section



7. Exploded view & parts list

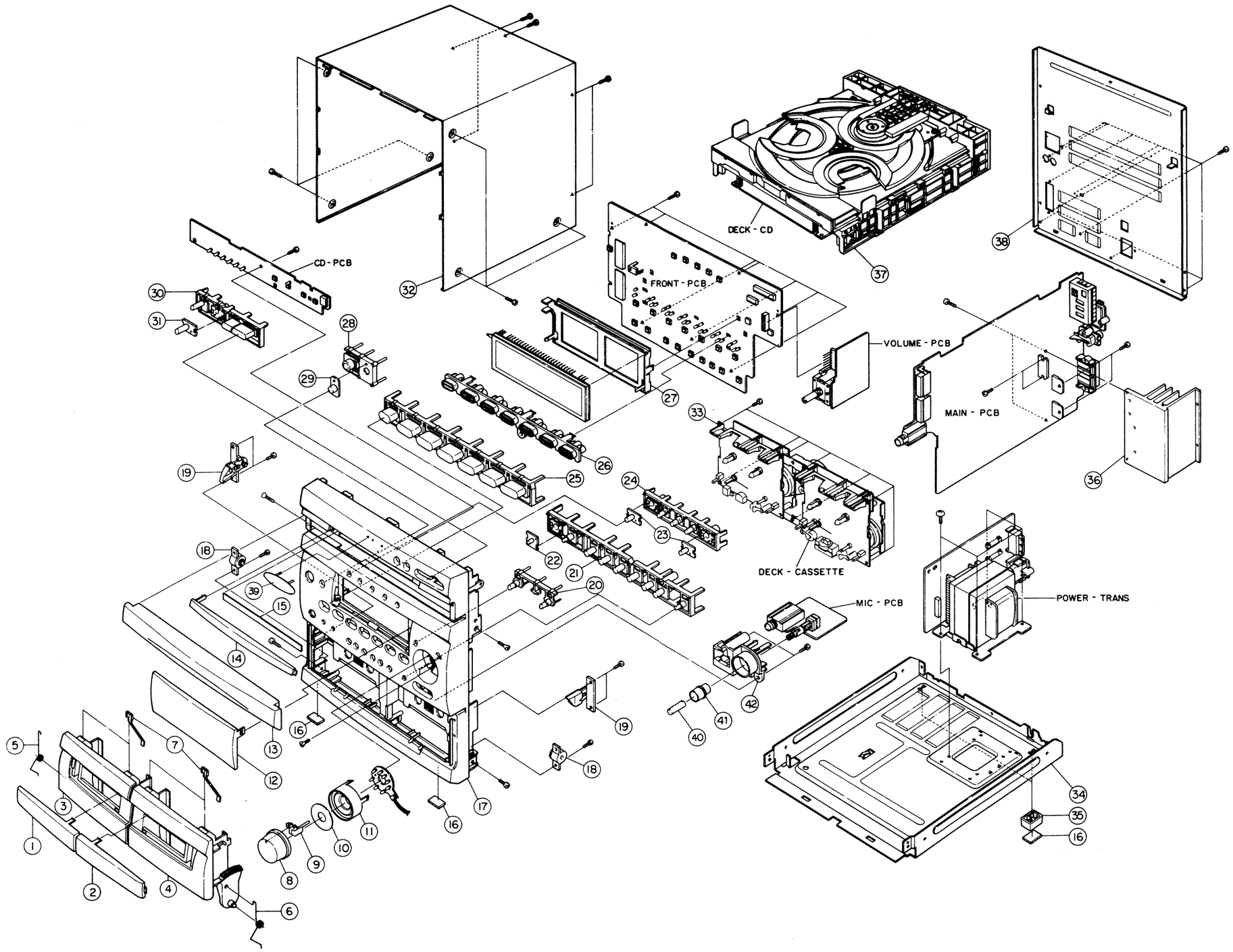
7-1. Main section

7-1. Parts list

● Exclutive part

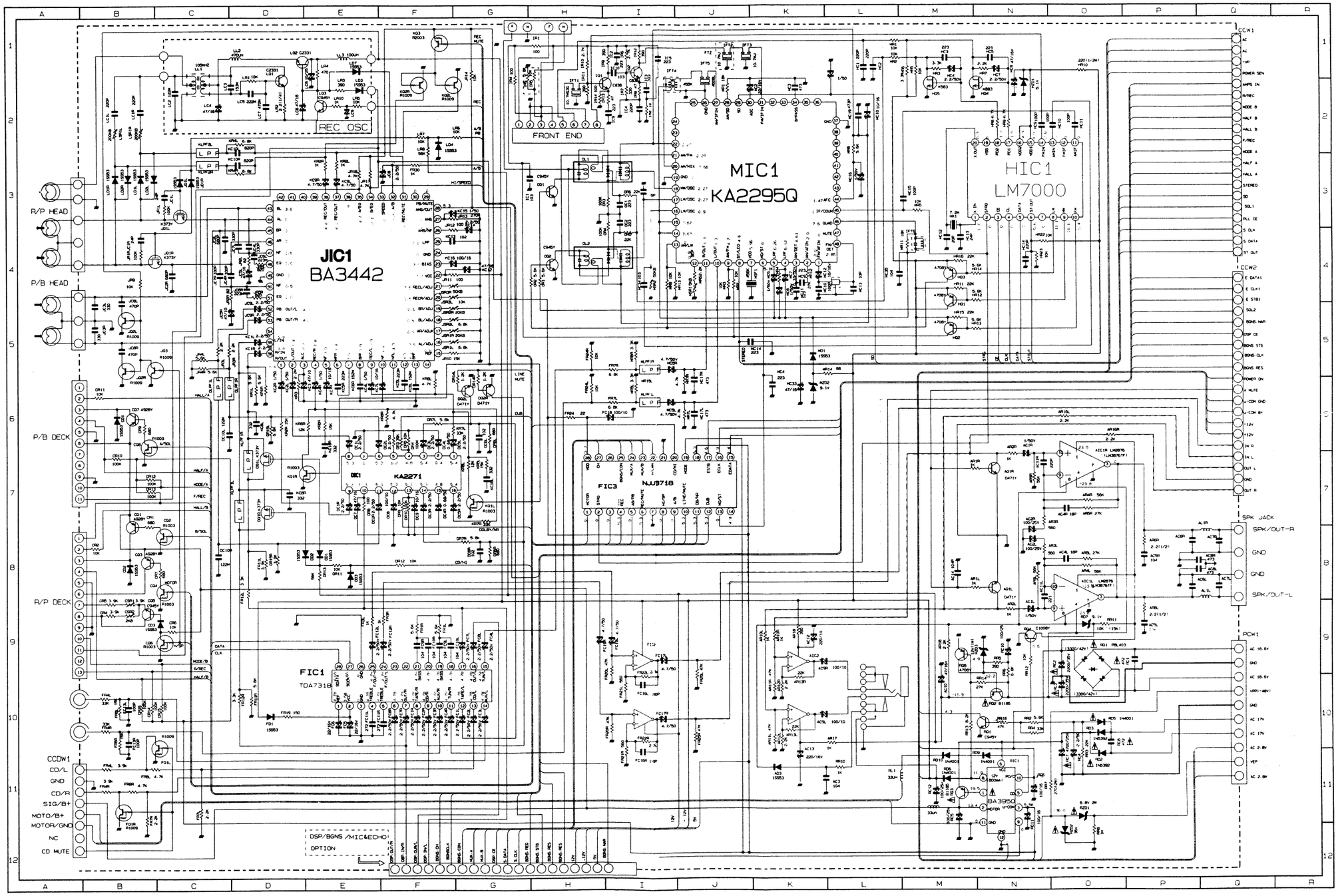
NO.	Code no.	Description	Specification	Q'TY	Remark
1	14073-0242-00	WINDOW-DOOR(A)	MAX-555/550 SMOKE PMMA 1X2	1	
2	14073-0243-00	WINDOW-DOOR(B)	MAX-555/550 SMOKE PMMA 1X2	1	
3	14041-0128-02	DOOR-CASS(B)	MAX-555,557/EXP ABS 94HB BLK	1	●
4	14041-0127-02	DOOR-CASS(A)	MAX-555,557/EXP ABS 94HB BLK	1	●
5	12724-0181-00	SPRING-DOOR(L)	MAX-555/550 SUS#27 PI0.8	1	
6	12724-0182-00	SPRING-DOOR(R)	MAX-555/550 SUS#27 PI0.8	1	
7	16674-518-510	SPRING-TAPE	SUS T0.35	1	
8	14083-0656-00	KNOB-VOLUME	MAX-555/550 BLK ABS 1X4	1	
9	12714-0063-00	LENS-VOLUME	MAX-555/550 PMMA TRP 1X4	1	
10	10214-0062-00	SHEET-VOLUME	MAX-555 H/SHEET T0.3 PI30X11	1	
11	13353-0040-00	GUIDE-VOLUME	MAX-555/550 MILKY PMMA 1X4	1	
12	14073-0241-02	WINDOW-TUNER	MAX-555 PMMA VIO	1	●
13	14043-0129-01	DOOR-TRAY	MAX-555/557/EXP ABS 94HB BLK	1	●
14	14073-0244-00	WINDOW-DECO	MAX-555/550 SMOKE PMMA 1X2	1	
15	14014-0029-00	INLAY(DECO)	MQ-555 T0.6 PC	1	
16	13054-0044-00	CUSHION-FOOT	MQ570A T2.0 HH-38C	4	
17	12000-0262-00	CABINET-FRONT	MAX-557/EXP MIPS BLK	1	●
18	15214-506-011	DAMPER-ASSY	POM PD790	2	
19	12689-0009-00	LATCH-ASSY	MAX-555 MOLD	2	
20	14083-0653-00	KNOB-MUTE	MAX-555/550 BLK ABS 1X2	1	
21	14083-0651-00	KNOB-DECK	MAX-555/550 BLK ABS 1X2	1	
22	12714-0059-00	LENS-BGNS	MAX-555/550 PMMA MILKY 1X4	1	
23	12714-0060-00	LENS-EQ	MAX-555/550 PMMA MILKY 1X4	2	
24	14083-0654-00	KNOB-EQ	MAX-555/550 BLK ABS 1X2	1	
25	14082-0650-00	KNOB-FUNCTION	MAX-555/550 TRP/BLK ABS 1X2	1	
26	13323-0188-00	HOLDER-LED	MAX-555/550 WHT/TI02 ABS 1X2	1	
27	13323-0187-00	HOLDER-FLT	MAX-555 BLK ABS 1X2	1	
28	14083-0652-00	KNOB-POWER	MAX-555/550 BLK ABS 1X4	1	
29	12714-0062-00	LENS-REMOCON	MAX-555/550 PMMA SMOKE 1X4	1	
30	14082-0655-01	KNOB-OPEN	MAX-555 BLK ABS 1X2	1	
31	12714-0061-00	LENS-CD	MAX-555/550 PMMA MILKY 1X4	1	
32	12001-0257-00	CABINET-TOP	MAX-555/550 T0.75 V/STEEL	1	
33	19049-0032-00	ASSY DECK TAPE	MAX-555 DECK MECHA	1	
34	12001-0258-00	CABINET-BOTTOM	MAX-555/550 T0.8 SECC	1	
35	13004-0014-00	FOOT	MAX-555/550 BLK ABS 1X4	2	
36	11122-0053-00	HEAT SINK	MAX-557 AL EXTR	1	
37	G3A1-3N	CDP PACK ASSY	3CD GENERAL	1	
38	12001-0259-02	CABINET-REAR	MAX-555/3 BAND SECC 0.8T	1	●
39	14534-0011-02	BADGE-BRAND	NEW SAMSUNG AL L30	1	
40	14084-0657-00	KNOB-MIC	MAX-555/550 BLK ABS 1X4	1	
41	14084-0658-00	KNOB-ECHO	MAX-555/550 BLK ABS 1X4	1	
42	13323-0189-00	HOLDER-JACK	MAX-555/550 BLK ABS 1X4	1	

7-1-2. Exploded view (MAX-557)

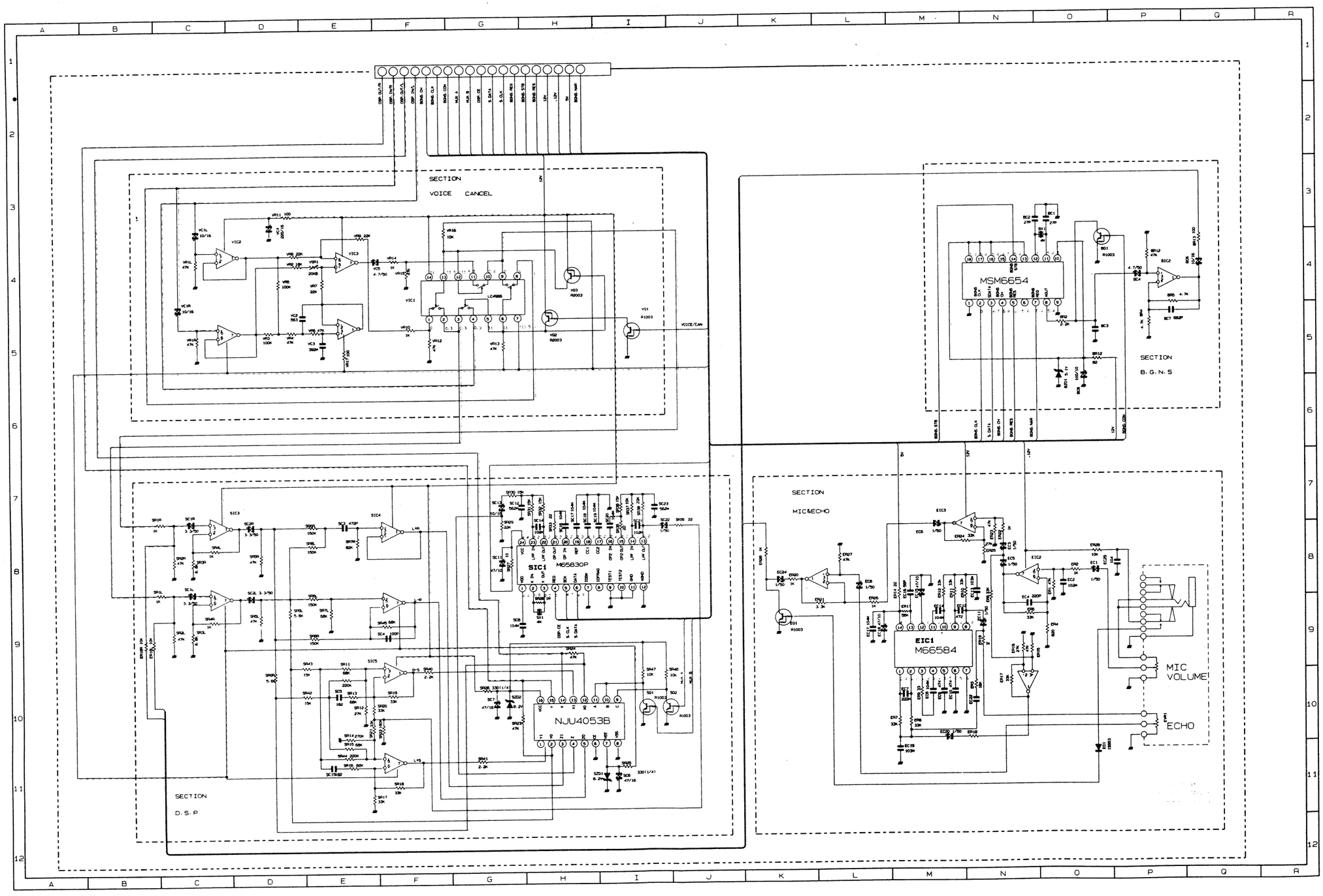


8. Schematic diagram

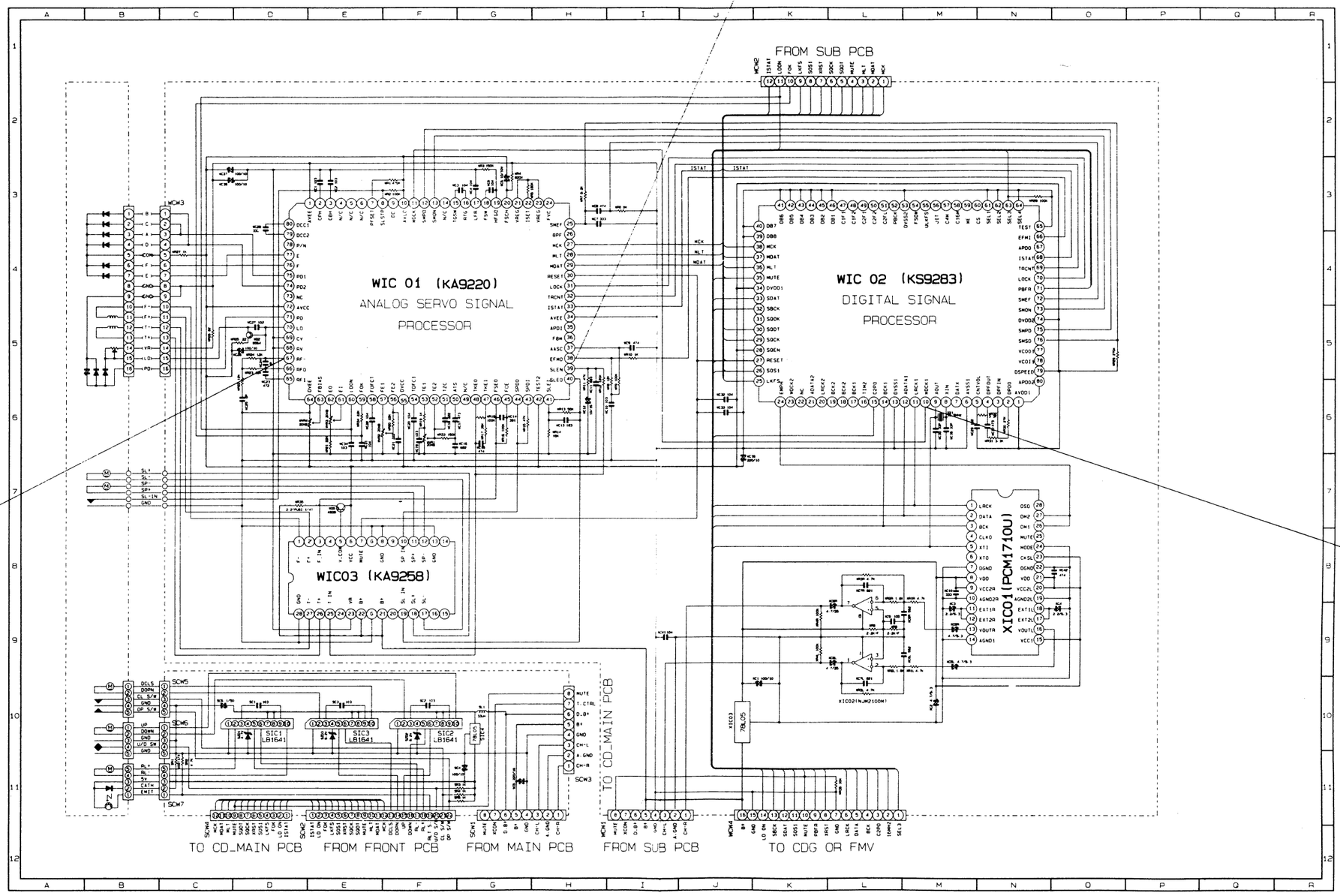
8-1. Main section



8-2. Option section

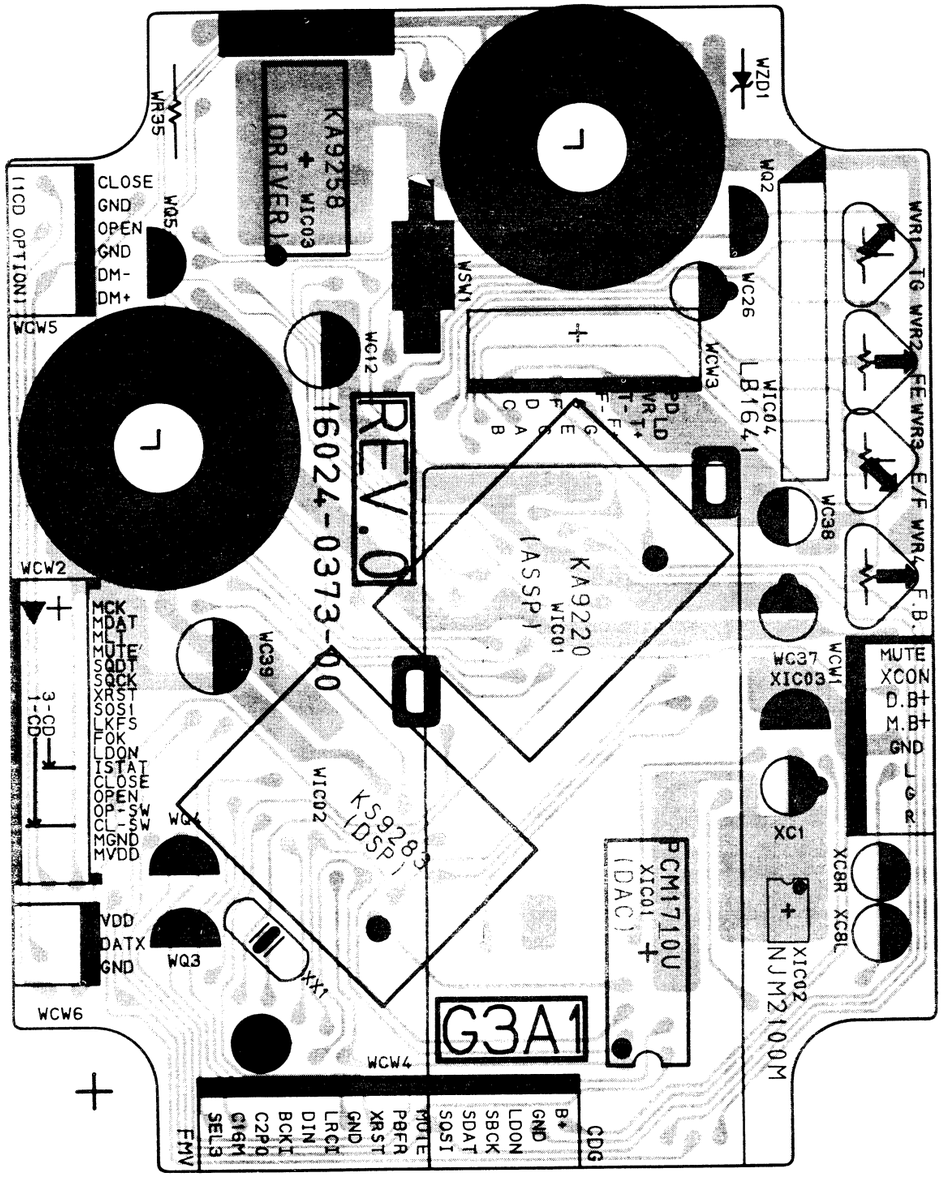


8-3. CD section

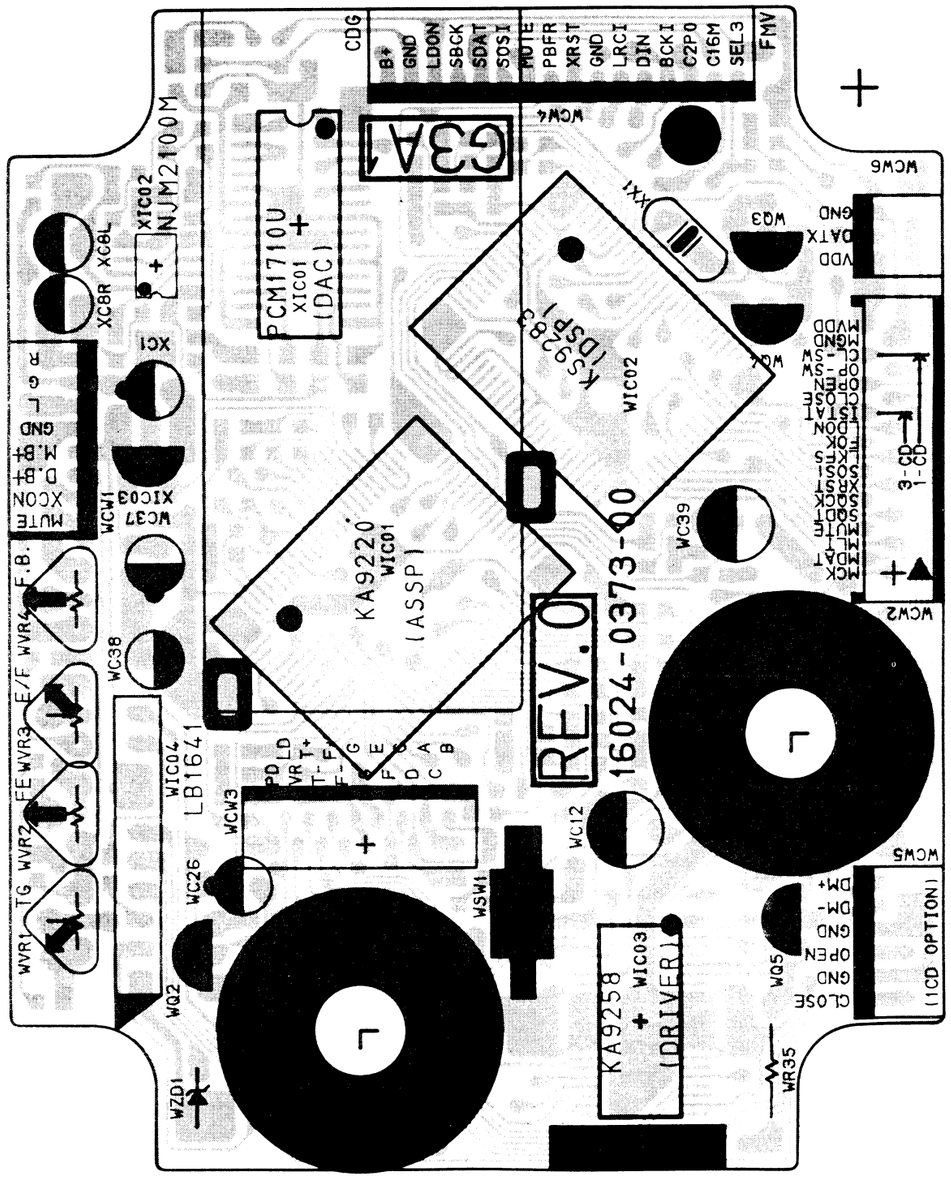


9. PCB Pattern and Marking diagram

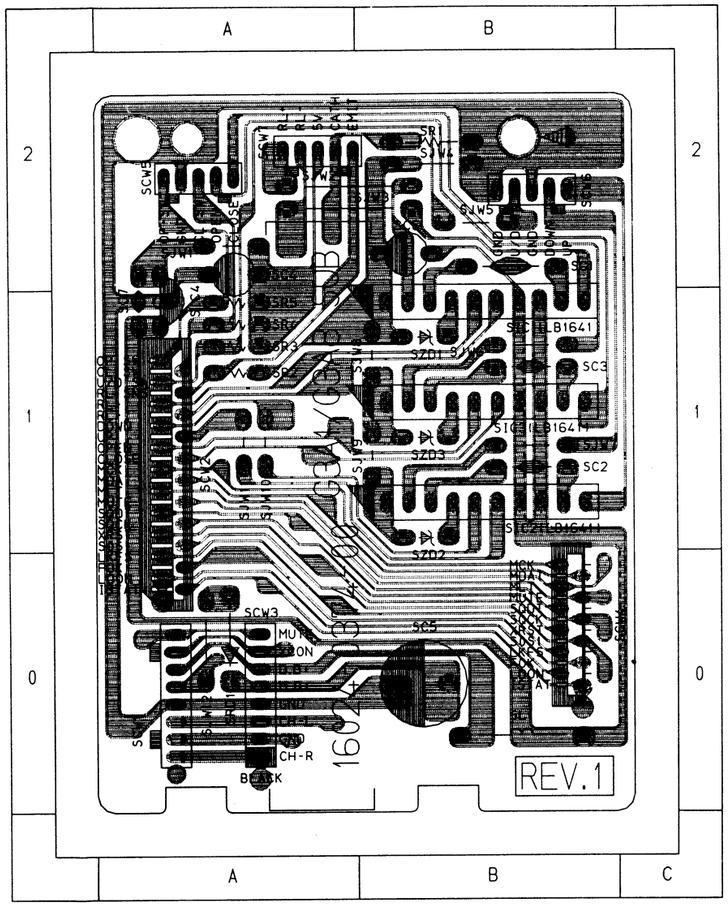
9-1. Top part



9-2. Bottom part



9-3. Sub part

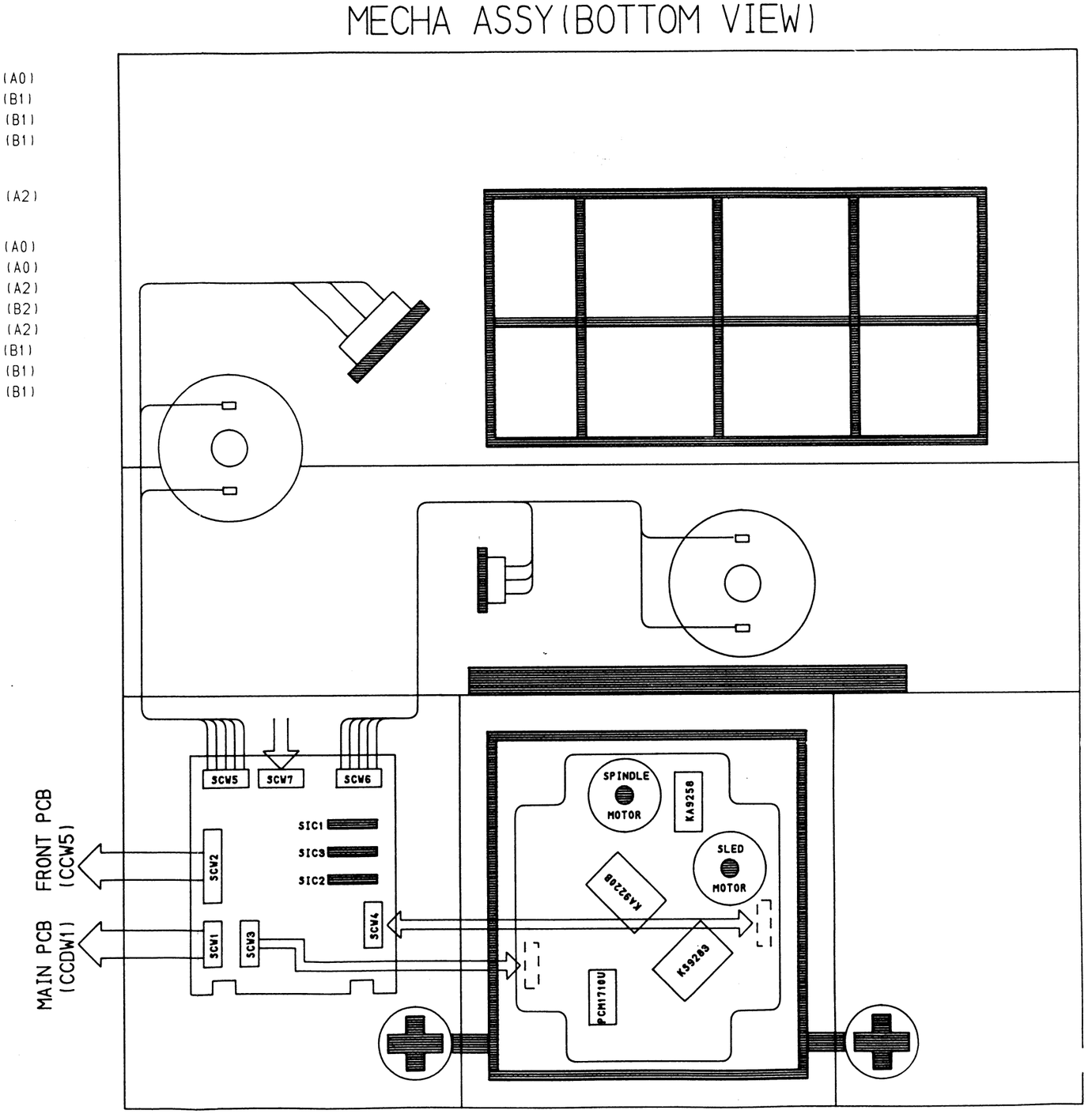


SRD1 (A0)
SZD1 (B1)
SZD2 (B1)
SZD3 (B1)

SIC4 (A2)

SCW1 (A0)
SCW3 (A0)
SCW5 (A2)
SCW6 (B2)
SCW7 (A2)
SIC1 (B1)
SIC2 (B1)
SIC3 (B1)

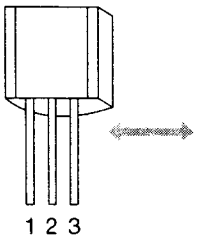
10. Wiring diagram



10. IC & TR internal diagram

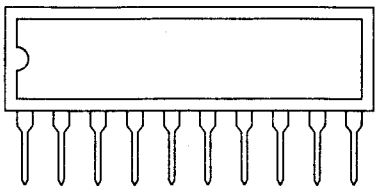
10-1. CD section

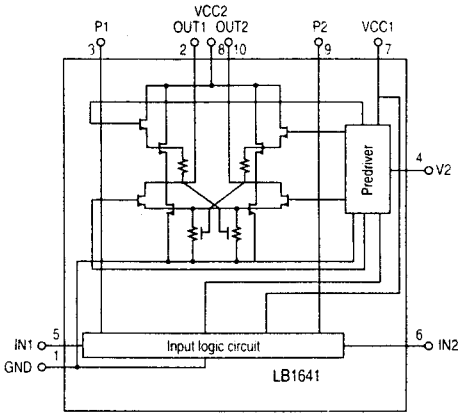
● TR



TR	1	2	3
B564	E	B	C
A928	E	C	B

● LB1641(MOTOR DRIVER): SIC1, 2, 3

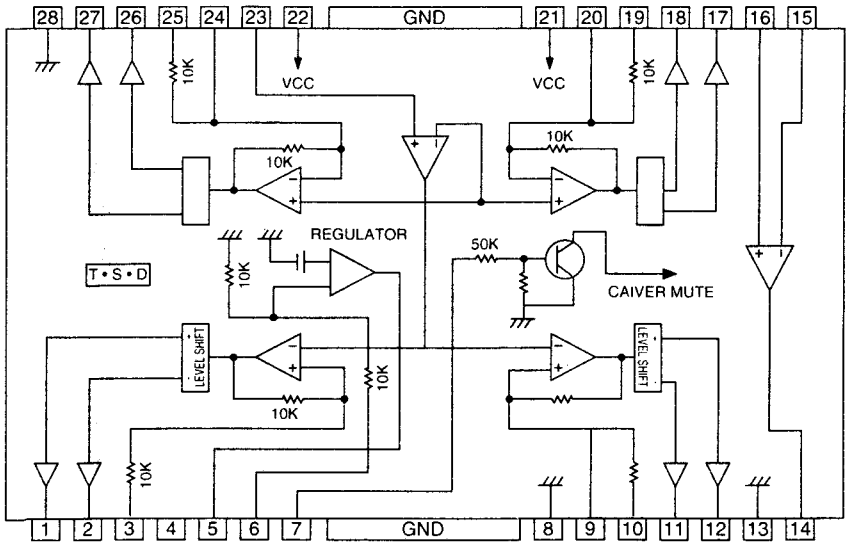




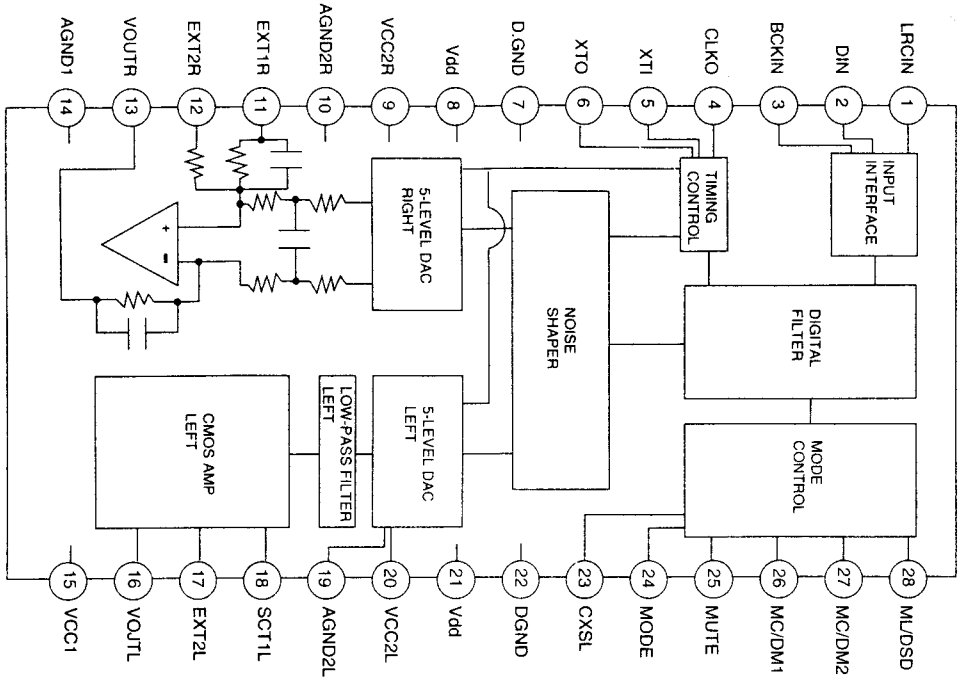
● NJM2100M(OP AMP) : XIC02

1. A OUTPUT
2. A- OUTPUT
3. A+ INPUT
4. V-
5. B+ INPUT
6. B- INPUT
7. B OUTPUT
8. V+

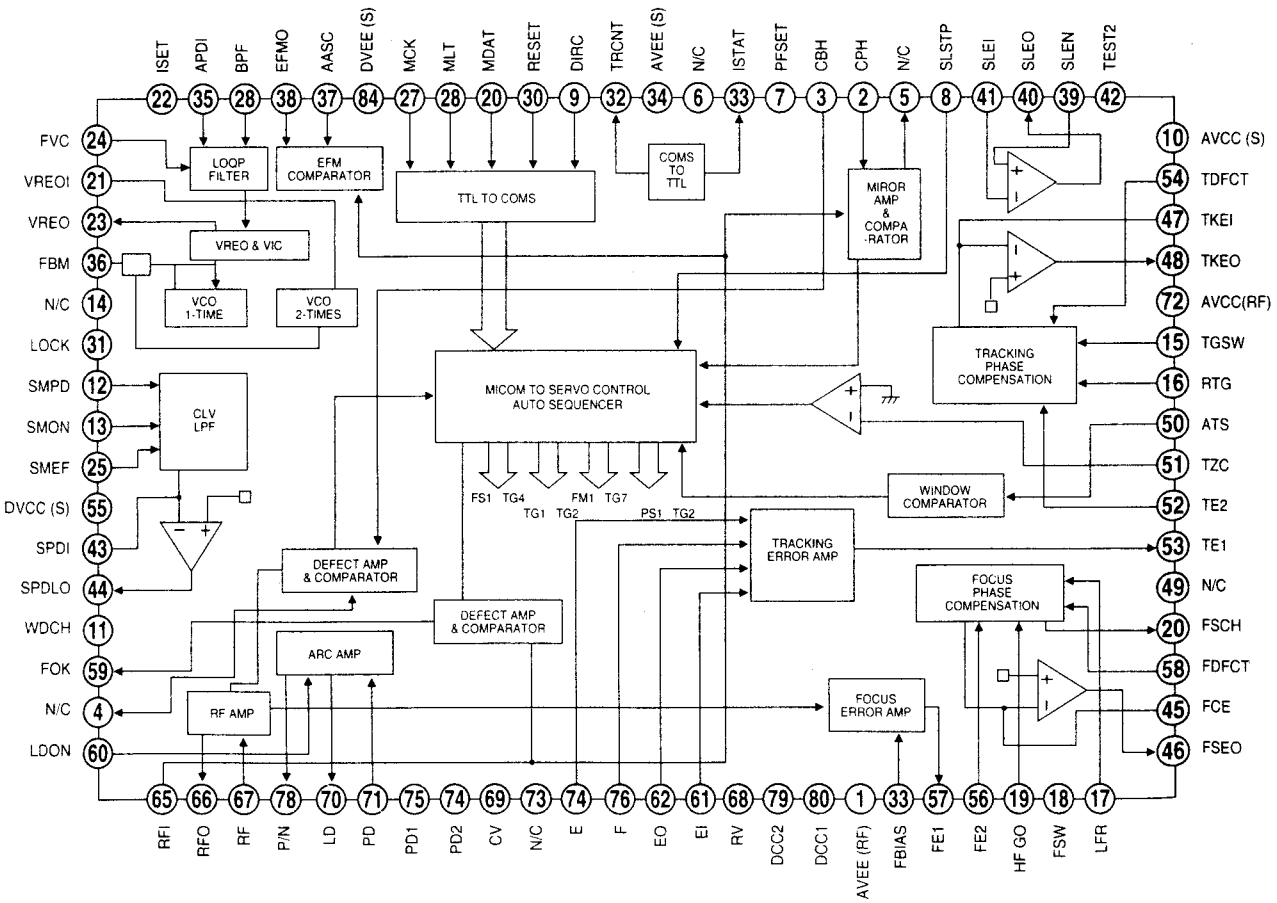
● KA9258 : WIC03



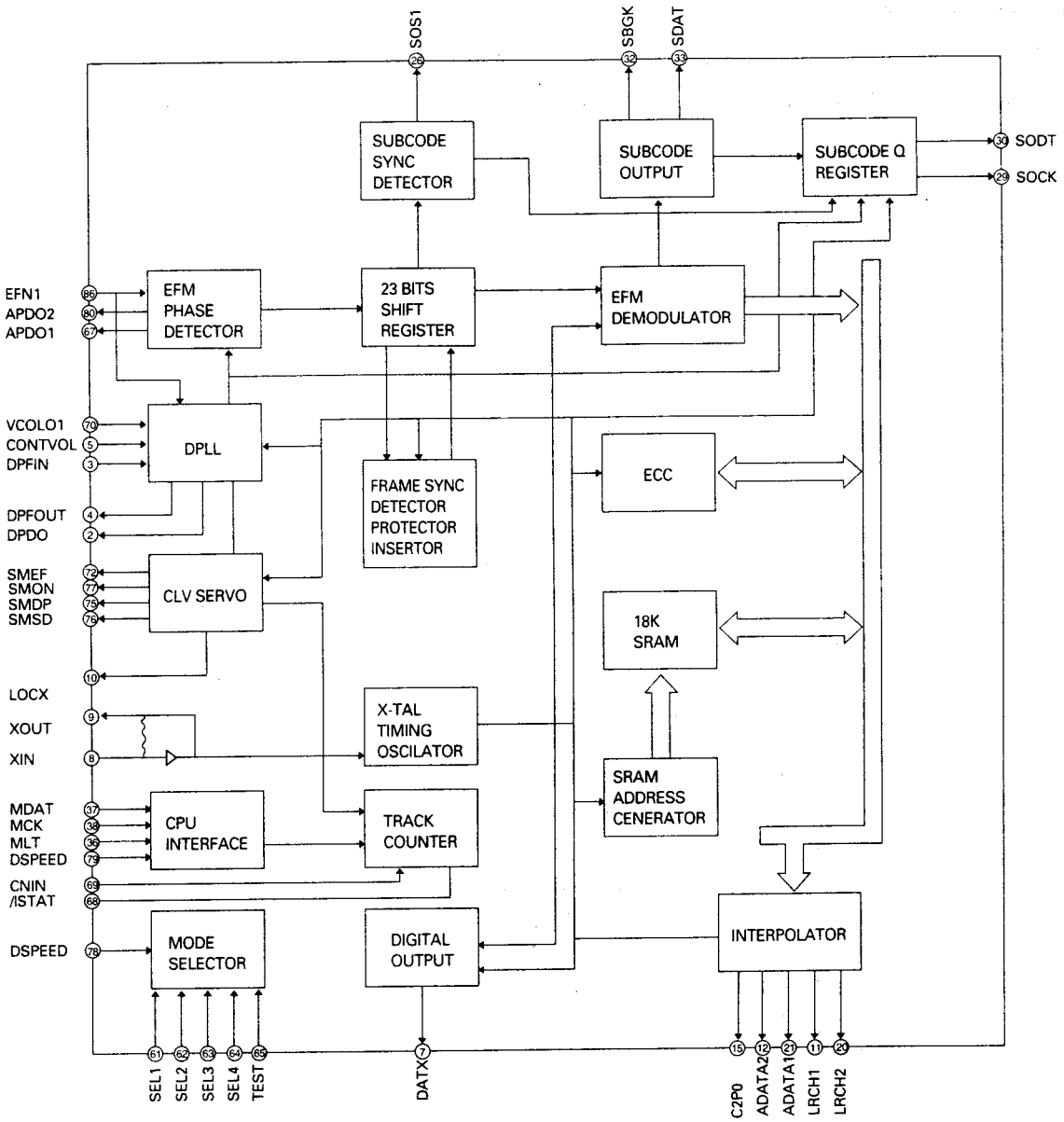
● PCN1701U(D/A CONVERTOR IC) : XIC01



● KA9220(ASSP) : WIC01



● KS9283(DSP) :WIC02



12. Electrical parts list

12-1. CD section

12-1-1. Main part

ϟ Static electricity

ϟ indicates parts for circuit safeguarding purposes. Therefore, when replacing,be sure to user specified only.

Location no.	Code no.	Description & Specification	Q'TY	Remark
WR35	11058-277-229	R FUSIBLE ; RF 1/4T 2.2-J	1	
WR10,19,27	11119-101-102	R CHIP ; MCR10,1K-J	3	
WR36	11119-101-103	R CHIP ; MCR10,2012S 10K-J	1	
WR2,9,16,18,28,XR4L,4R	1119-101-104	R CHIP ; MCR10,2012S 100K-J	7	
WR6	11119-101-105	R CHIP ; MCR10,2012S 1M-J	1	
WR8,22,23,24	11119-101-123	R CHIP ; SCR2012J123 100CT	4	
WR12	11119-101-124	R CHIP ; SCR2012 120K-J	1	
WR14	11119-101-153	R CHIP ; SCR2012J153 100CT	1	
WR3,33	11119-101-154	R CHIP ; MCR10,2012S 150K-J	2	
XR2L,2R	11119-101-182	R CHIP ; SCR2012J 182 100CT	2	
WR5	11119-101-184	R CHIP ; SCR2012 108K-J	1	
WR25	11119-101-220	R CHIP ; SCR2012J 220 100CT	1	
WR20,21,34	11119-101-223	R CHIP ; MCR10,2012S 22K-J	3	
WR30	11119-101-273	R CHIP ; MCR10,2012S 27K-J	1	
WR29	11119-101-274	R CHIP ; SCR2012J 270K	1	
WR31,32	11119-101-332	R CHIP ; SCR2012S 3.3K-J	2	
WR17	11119-101-393	R CHIP ; SCR2012 10V 39K-J	1	
XR1L,1R,3L,3R	11119-101-472	R CHIP ; MCR10,2012S 4.7K-J	4	
WR11,15	11119-101-473	R CHIP ; MCR10,2012S 47K-J	2	
WR1	11119-101-474	R CHIP ; SCR2012S 470K-J	1	
WR37	11119-101-479	R CHIP ; SCR2012J 479100CT	1	
WR13	11119-101-563	R CHIP ; SCR2012 56K-J	1	
WR7	11119-101-822	R CHIP ; SCR2012 822 100CT	1	
WR4	11119-101-824	R CHIP ; SCR2012 824J	1	
WR20	11119-102-820	R CHIP ; SCR2012 1/8 PL.P 82.F	1	
WIC03	11124-0061-00	HEAT SINK ; MAX-555 ETHD T0.5	1	
XC9	11128-017-105	C CHIP CERAMIC ; GRM 42-6Y5V 105Z 16P	3	
WC8,9,15	11128-018-474	C CHIP CERAMIC ; GRM40 Y5V 474Z16-530	9	
WC3,4,5,20,22,31,32,33, 41	11129-001-104	C CHIP CERAMIC ; CC 2012 Y5V 104Z T	7	
WC7,28,XC10	11129-001-333	C CHIP CERAMIC ; CC 2012 X7R 333K T	1	
WC27	11129-004-102	C CHP CERAMIC ; CC 2012 X7R 102K T	5	
WC1,2,10,19,34	11129-004-103	C CHIP CERAMIC ; CC 2012 X7R 103K T	1	
WC29	11129-004-152	C CHIP CERAMIC ; CC 2012 X7R 152K T	1	
WC13	11129-004-183	C CHIP CERAMIC ; CC 2012 X7R 183K T	2	
WC18,21	11129-004-222	C CHIP CERAMIC ; CC 2012 X7R 222K T	2	
WC17,30	11129-004-473	C CHIP CERAMIC ; CC 2012 X7R 473K T	2	
XC6L,6R	11129-004-562	C CHIP CERAMIC ; CC 2012 X7R 562K T	1	
WC16	11129-004-682	C CHIP CERAMIC ; CC 2012 X7R 682K T	1	
WC11	11129-004-683	C CHIP CERAMIC ; CC 2012 Y5V 683Z T	2	
WC35,36	11129-008-330	C CHIP CERAMIC ; CC 2012 COG 330J T	1	
WC14	11129-008-391	C CHIP CERAMIC ; CC 2012 COG 391J T	1	
WC25	11129-009-080	C CHIP CERAMIC ; CC 2012 COG 080J T	1	
WC23	11129-012-472	C CHIP CERAMIC ; CC 2012 X7R 472K T	2	
XC3,4	11152-108-229	C CHIP TANTALLUM ; ELECT 2.2UF-6.3V R		

Location no.	Code no.	Description & Specification	Q'TY	Remark
XC2,5L,5R	11155-108-479	C CHIP TANTALUM ; CS 6.3V T 4.7M M32	3	
WC6	1156-201-106	C CHIP TANTAL ; 3428 10UF 10VM B-TYPE	1	
WVR1,2,3,4	11249-102-043	VR SEMI TAPE-V ; EVN-DCA A03B24(20K)	4	
WC39	11608-102-224	C ELECTROLYTIC ; SMS T 10V 220M	1	
WC12	11608-103-103	C ELECTROLYTIC ; SMS T 16V 10M(5X11)	1	
WC26,37,38,XC1	11608-152-101	C ELECTROLYTIC ; SMS T 10V 100M	4	
XC8L,8R	11608-154-479	C ELECTROLYTIC ; SRE T 25V 4.7M(3X5)	2	
XIC03	12119-601-160	IC REGULATOR ; TA78L005/MC 78L05AC	1	
WQ5	12169-201-100	TRANSISTOR ; KSA928A-Y/KTA1273-Y TAPE	1	
WQ2	12149-202-050	TRANSISTOR ; KSR564A-Y	1	
WCW1	13349-139-080	CONNECTOR-WAFER ; 53015-0810 2.0MM	1	
WSW1	13564-601-100	SWITCH LEAF ; MSW-1731CVC	1	
XX1	14539-503-083	CERAMIC RESONATOR ; CSA 16.93MX040-TF	1	
	16024-0373-00	P.C.B ; G3A1 T1.6 W180 L1230 SILVER	0.25	
XR8,9	A1020-0376	R CHIP ; RH 1/10 CS 222-F C2012 MCR/R	2	
XC7L,7R	A1100-0760	C CERAMIC.CHIP ; CC 73 CH 50V T 821-J	2	
WC24	A1100-0909	C CERAMIC ; CC 73 COG 16V T 040-J C20	1	
WIC03	A4012-0169	IC LINEAR ; KA9258 SOP CD-4CH DRIVER	1	
WIC01	A4012-0290	IC LINEAR ; KA9220 QFP RF+SSP	1	ϟ
WIC02	A4012-0292	IC LINEAR ; KA9283 QFP DSP+DPLL	1	ϟ
WCW3	A6010-1523	CONNECTOR-WAFER ; 00-6200-167-012-800	1	
WW2	A6010-1526	CONNECTOR-WAFER ; 28-6216-012-100-808	1	
XIC02	B4008-1206	IC OP AMP ; NJM2100M SOP 8P TAPE(TE1)	1	
XIC01	B4012-0381	IC LINEAR ; PCM1710U SOP D/A	1	ϟ
	19129-0352-00	ASSY (CD+DECK) ; G3A1-3CD	1	

12-1-2. SUB part

Location no.	Code no.	Description & Specification	Q'ty	Remark
SR1	11018-277-101	R CARBON ; RD 1/4T 100-J	1	
SC1,2,3	11447-910-103	CONDENSER AXIAL-LEAD ; 16V EP050 Y100	3	
SC4	11608-102-104	C ELECTROLYTIC ; SMS T 10V 100M(5X11)	1	
SC5	11608-103-221	C ELECTROLYTIC ; SMS T 16V 220M	1	
SC6	11608-106-102	C ELECTROLYTIC ; SMS T 50V 1M(5X11)	1	
SIC1,2,3	12119-203-500	IC MOTOR DRIVER ; LB1641	3	
SIC4	12119-601-160	IC REGULATOR ; TA78L005/MC 78L05AC	1	
SZD1	12169-403-200	DIODE ZN ; RD407E/UZ 4.7BM	1	
SZD2,3	12169-404-800	DIODE ZENER ; 500MW UZ-6.2BSB TAPING	2	
SL1	12429-211-330	COIL CHOKE AXIAL LEAD : RES-1 Q40 LAL	1	
SCW5,6,7	13349-119-050	CONNECTOR-WAFER ; 53014-0510 20MM	3	
SCW1	13349-119-080	CONNECTOR-WAFER ; 53014-0810 2.0MM	1	
	16024-0374-00	P.C.B SUB ; G3AL/G3A8 T1.6 W247 L247	0.083	
SCW3	16439-0024-00	CONNECTOR WIRE-BSS ; 51004/5295-08P	1	
SCW4	A6010-1551	CONNECTOR-FPC ;28-6216-012-000-808	1	
SRD1	A6040-0011	WIRE SO COPPER ; PT0.6SN T 52MM	1	
SCW2	B6010-1609	CONNECTOR-WAFER ; 52045-2245 GRY	1	